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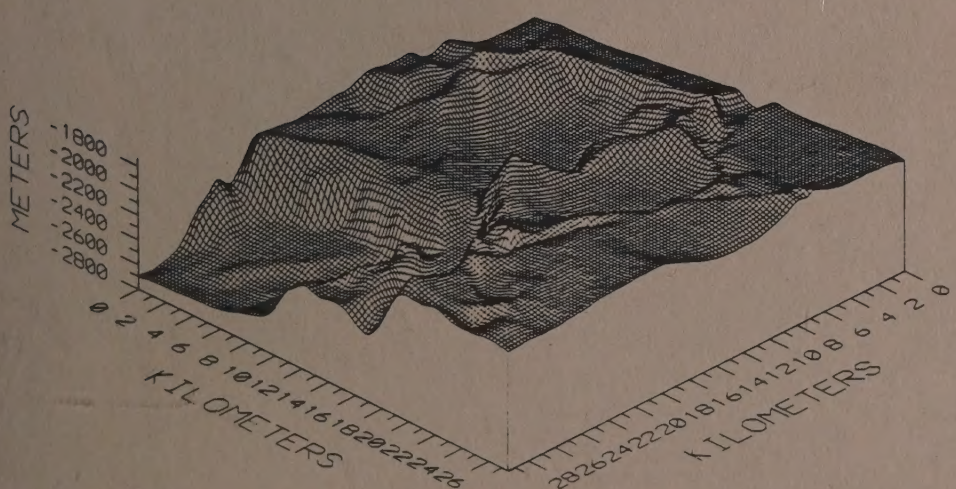
Policy and Science of Exclusive Economic Zone Mapping: A Bibliography



SALT FEATURES NEAR SIGSBEE ESCARPMENT

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Environmental, Satellite, Data, and Information Service
National Oceanographic Data Center

POLICY AND SCIENCE

OF EXCLUSIVE ECONOMIC ZONE MAPPING:

A BIBLIOGRAPHY

NOVEMBER 1989

On March 10, 1983, President Reagan proclaimed an Exclusive Economic Zone (EEZ) in which the United States will exercise sovereign rights in living and non-living resources within 200 nautical miles of it's coast. The present government EEZ effort is represented by a number of important programs carried out by various agencies. The National Oceanic and Atmospheric Administration is contributing to this national effort and is happy to make this bibliography available to the scientific community.

The focus of this bibliography is on non-living resources and ocean-bottom mapping. It is not intended to be a comprehensive literature review, but rather to be a selective compilation of current citations retrieved from relevant databases. The databases are: Aquatic Sciences & Fisheries Abstracts (ASFA); National Technical Information Service (NTIS); Geological Reference File (GEOREF); and Physics Abstracts (INSPEC). Descriptor terms are included when an abstract was not available.

This bibliography is divided into: (1) Policy; (2) Resources; and (3) Surveys. The citations are arranged in alphabetical order by author within these categories.

Questions about this material may be addressed to Reference Desk, NOAA Central Library, 6009 Executive Blvd., Rockville, MD 20852, or call (301) 443-8330.

I. POLICY

US Navy; release of sea-floor maps.
Anderson, A.
Nature (London) 338: 6215,448, 1989.

Descriptors: *Atlantic Ocean/*Pacific Ocean/*government agencies/oceanography/current research/ocean floors/maps/NOAA/United States Exclusive Economic Zone/North American Atlantic/North Atlantic/North American Pacific/bathymetric maps/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

EEZ-SCAN program maps sea floor (off the U.S. West Coast).
Anon.
GEOTIMES, vol. 30, no. 1, pp. 13-14, 1985.

Abstract: In 1983 the United States declared an Exclusive Economic Zone that asserted sovereign rights and jurisdiction over an area extending 200 nautical miles (370 km) seaward from its shores. The U.S. Geological Survey's EEZ-SCAN program, designed to map the EEZ systematically, last spring began a long-range side-scan sonar survey off the U.S. West Coast. That program consisted of four cruises, each lasting three to five weeks. The survey's main product is a sonograph mosaic that depicts an 850,000-km super(2) area of the sea floor between the Mexican and Canadian borders and extends seaward 370 km from the edge of the continental shelf. Other data collected on the cruises include two-channel digital seismic-reflection, 3.5-kHz high-resolution and 10-kHz bathymetric profiles, and magnetic field data along track lines spaced at nominal 30-km intervals.

Plan for mapping the seafloor of the United States Exclusive Economic Zone 1988-92
Anonymous. 52p, 1987. Avail.: NOAA.

Descriptors: *United States/oceanography/continental margin/maps/United States Exclusive Economic Zone; bathymetry/cartography/ocean floors/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/26 (ECONOMIC GEOLOGY/GENERAL & MINING)

The Exclusive Economic Zone; resources for the future.
Baker, D. J. Joint Oceanogr. Inst., Washington, DC, USA
Geological Survey Circular,C-1018, 7-9, 1988.

Descriptors: *ocean floors/mineral resources/mineral exploration/USGS/United States Exclusive Economic Zone; exploration/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Progress made toward ocean mining.
Bettenberg, W. D. Minerals Manage. Serv., Washington, DC, USA
SEA TECHNOL, vol. 28, no. 1, pp. 27-28, (1987).

Abstract: The U.S. Department of the Interior the federal agency authorized by the Outer Continental Shelf Lands Act (OCSLA) to lease offshore areas for mineral development, has taken several steps in 1986 toward future leasing of the U.S. Exclusive Economic Zone (EEZ) and anticipates more progress 1987. The department's Minerals Management Service (MMS) is currently developing a three-tier regulatory framework for administering exploration and development of non-energy minerals in the EEZ. Under this framework, separate regulations are being promulgated for prospecting, leasing, and operations.

The outer continental shelf program; status, prospects, and information needs.
Bettenberg, W. D.U. S. Miner. Manage. Serv., Washington, DC, USA
Geological Survey Circular, C-1018, 27-29, 1988.

Descriptors: *continental shelf/economic geology/mineral resources/USGS/United States Exclusive Economic Zone/outer shelf/programs/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

EEZ exploration could be hampered by security restrictions on data.
Booda, L. L. c/o Compass Publications Inc., Suite 1000, 1117 N. 19th St., Arlington, VA 22209, USA
SEA TECHNOL, vol. 27, no. 2, pp. 16-19, (1986).

Abstract: On March 10, 1983 President Ronald Reagan proclaimed sovereign rights over all resources in the oceans surrounding the U.S. to a distance of 200 nautical miles. The tug of war that erupted between several federal agencies and the industrial and academic sectors is an outgrowth of technological break-throughs in sensors that are used in exploring the seas, particularly the ocean bottom mapping equipment that produces highly detailed bathymetric data. So good is the data obtained that the Department of Defense (DoD), represented by the Navy, is objecting to release of bottom data obtained by ships of the National Oceanic and Atmospheric Administration (NOAA), in the form of raw data or revealed on bathymetric charts. The Navy maintains that highly accurate navigation by the submarines of a potential adversary would enable missile carrying submarines to pin-point their launching positions.

Adjacent state issues for the United States in establishing an Exclusive Economic Zone: The cases of Canada and Mexico.
Bowen, R. E.; T. M. Hennessey. Environ. Sci. Program, Univ. Massachusetts, Boston, MA 02125, USA.
OCEAN DEV. INT. LAW, vol. 15, no. 3-4, pp. 355-376, 1985.

Abstract: This paper will analyze and evaluate the issues that might emerge between the United States and both Canada and Mexico in the establishment of adjacent Exclusive Economic Zones (EEZs).

Information needs to develop technology to recover the mineral resources of the EEZ.
Brown, D. S. U. S. Bur. Mines, Washington, DC, USA
Geological Survey Circular, C-1018, 25, 1988.

Descriptors: *ocean floors/mineral resources/mineral exploration/USGS/United States Exclusive Economic Zone;

technology/exploration/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

The Year of the Ocean and Exclusive Economic Zone. 10. Annual Conference of the International Association of Marine Science Libraries and Information Centers: Year of the Oceans Woods Hole, MA (USA) 2-5 Oct 1984.
Byrne, J. Oregon State Univ., Corvallis, OR 97331, USA
IAMSLIC CONF. SER, no. 1, pp. 1-16, 1985.

Abstract: The United States has from its earliest days depended upon the ocean for transportation, sustenance, defense, and inspiration. The time is at hand to increase the public's awareness of the importance of the ocean and its resources, to improve our sense of stewardship of those resources and to enhance cooperation in ocean activities between government and private sector. The Year of the Ocean is designed to accomplish these goals. Its success will be measured by the extent to which all who care about the ocean participate.

Exclusive Economic Zone and public international law.
Charney, J. I. Sch. Law, Vanderbilt Univ., Nashville, TN 37203, USA
OCEAN DEV. INT. LAW, vol. 15, no. 3-4, pp. 233-288, 1985.

Abstract: This paper will set the international background for the evolution of the Exclusive Economic Zone (EEZ) concept in international law and in state practice. It will review the relevant provisions of the UNCLOS III and will discuss the extent to which they have or are likely to guide national practice in the future. The paper will also examine the Regan Proclamation from an international legal perspective, as well as the possible impact of action taken by the United States in fashioning its EEZ on the stability of the EEZ concept internationally.

The problem of governance of U.S. ocean resources and the new Exclusive Economic Zone.
Cicin-Sain, B.; R. W. Knecht. Dep. Polit. Sci., Univ. California, Santa Barbara, CA 93106, USA
OCEAN DEV. INT. LAW, vol. 15, no. 3-4, pp. 289-320, 1985.

Abstract: This paper discusses major problems existing in the current ocean governance regime of the United States, many of which are rooted in the regime's single-purpose and fragmented nature. In the concept of the new 200-mile U.S. Exclusive Economic Zone (EEZ), proclaimed in March 1983 by President Reagan, with its notion of sovereign rights over essentially all resources within a common zone, may lie the seeds of a more effective, second-generation approach to ocean goverance- one better suited to the increased ocean exploitation likely to occur in the coming decades.

Law of the Sea Treaty, 1982: One Observer's Assessment of the Conference, the Treaty and Beyond.
Clingan, T. A. Washington Univ., Seattle. Sea Grant Program 27p, c1986.

Abstract: The law of the sea conference: Success or failure; Leadership and procedural matters; The comprehensive package; The role of ideology; Barriers to agreement; Changes in U.S. stance; Treaty status (Archipelagoes, Straits, Exclusive economic zone, Consistency, The continental shelf, Deep seabed mining); What lies ahead.

Advanced technology and science: A key to oceanic development.
Corell, R. W. Natl. Sci. Found., Washington, DC, USA
MAR. TECHNOL. SOC. J, vol. 22, no. 1, pp. 50-57, (1988).

Abstract: This paper explores some of the issues that will likely drive economic and industrial development of the oceans and the EEZ during the next ten to twenty years. The focus will be on those issues that affect the research and educational institutions of the U.S. Population growth and resulting demographic shift to an increasing dominance by the developing countries will place new stresses on world affairs and will heighten the roles the oceans can play in such areas as transportation, communication, disposal of wastes, and as a source of food and raw materials. A range of economic and industrial development opportunities are discussed and several areas of engineering research and technology development are proposed that have the potential of aiding in that economic and industrial development.

Technology, competitiveness, and the Federal role in the Exclusive Economic Zone.
Curlin, J. W. U. S. Congress, Off. Technol. Assess., Washington, DC, USA
Geological Survey Circular, C-1018, 15-19, 1988.

Descriptors: *ocean floors/mineral resources/mineral exploration/USGS/United States Exclusive Economic Zone; technology/exploration/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Information needs and multiple-use decisions; an environmental perspective.
Curtis, C. E. Oceanic Soc., Washington, DC, USA
Geological Survey Circular,C-1018, 31-34, 1988.

Descriptors: *ocean floors/*ecology/mineral resources/concepts/mineral exploration/marine environment/USGS/United States Exclusive Economic Zone/exploration/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/22 (ENGINEERING & ENVIRONMENTAL GEOLOGY)

The outward limit of the Department of Interior's authority over submerged lands -- the effect of customary international law on the Outer Continental Shelf Lands Act.
Darm, D.
WASH. LAW REV, vol. 60, no. 3, pp. 673-696, 1985.

Beneath the surface at the Office of Undersea Research.
De Luca, M.; E. A. Finkle. NOAA Off. Undersea Res., Washington, DC, USA
SEA TECHNOL, vol. 27, no. 8, pp. 61-65, (1986).

Abstract: Incorporating several different areas of programs, the National Oceanic and Atmospheric Administration's (NOAA) Office

of Undersea Research (OUR) encompasses the globe in pursuit of knowledge obtainable from the hydrosphere. OUR sponsors investigations in six broad categories which require the use of advanced undersea technology: Global oceanic and climate processes pathways and fate of material in the ocean coastal oceanic and estuarine processes ocean lithosphere and mineral resources biological productivity and living resources and ocean services. Each of the missions supported will attempt to fill in a piece of the knowledge gap related to the processes governing the balance of ecosystems. Research will continue in each of the theme areas so that, informed decisions can be made with respect to the management and wise use of resources within the exclusive economic zone (EEZ).

The United States Exclusive Economic Zone: Mineral resources. Meet. on Maritime Boundaries and Ocean Resources Reading (UK) Jan 1986. Earney, F. C. F. Dep. Geogr., Northern Michigan Univ., Marquette, MI 49855, US. App. 162-181, 1987.

Abstract: Challenges faced by the USA government regarding establishement of the EEZ are examined, considering in particular exploitation of the mineral resources. Maritime boundaries are discussed, describing those shared by the USA with Canada, USSR, Mexico, the Caribbean and the Pacific.

New oceanic and coastal atlases focus on potential EEZ conflicts.
Ehler, C. N.; D. J. Basta; T. F. LaPointe, et al.
Oceanus (Woods Hole) 29: 3,42-51, 1986.

Descriptors: *United States/oceanography/marine geology/United States Exclusive Economic Zone/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

The coastal zone management experience as a model for collaborative resource management. National Conference on the States and an Extended Territorial Sea San Antonio, TX (USA) 9-11 Dec 1985.
Evans, N.Off. Ocean and Coast. Resour. Manage., NOAA, Washington, DC, USA
REP. TEX. A&M UNIV. SEA GRANT PROGRAM, pp. 101-105, 1987.

Abstract: As the nation looks forward to emerging ocean management needs and to a consideration of whether changes are needed in current governance scheme for the territorial sea and the exclusive economic zone, a step back in time to the early 1970's and the development of this nation's coastal zone management system can provide important insights, possible comparisons, and demonstrated realities. In a very broad sense coastal zone management is a comprehensive, multiple-use, collaborative planning system for the management, beneficial use, protection and development of coastal zone resources.

Hard mineral resource development policy in the U.S. Exclusive Economic Zone: A review of the role of the coastal states.
Fischer, D. W. Grad. Cent. Public Policy, California State Univ., Long Beach, CA 90840, USA
OCEAN DEV. INT. LAW, vol. 19, no. 2, pp. 101-111, (1988).

Abstract: The 1983 proclamation of U.S. jurisdiction over all marine resources within 200 nautical miles of the U.S. coastline added nearly 4 billion acres to the U.S. greatly increasing its present size of 2.3 billion acres. This new Exclusive Economic Zone (EEZ) extended U.S. control through the federal government over all marine resources to include fisheries, thermal energy, oil and gas, and hard (nonenergy) minerals. This paper is concerned with hard minerals in relation to state interests. Coastal states appear concerned over the development of hard minerals in the offshore whether or not the location of these deposits is within, adjacent to, or far away from their legal coastal boundaries. Their concern stems from the need to locate or continue the operation of smelters and processing plants within their coastal zones along with necessary transport and waste disposal facilities, an economic interest in certain minerals in and outside of their offshore jurisdictions, the desire to shape these activities through joint decision-making, and the interest in sharing part of the federal revenues received from ocean mining.

Ocean mining: What does it mean for local governments?
Fischer, D. W. Grad. Cent. Public Policy and Adm., California State Univ., Long Beach, CA 90840, USA
OCEAN SHORELINE MANAGE, vol. 12, no. 1, pp. 81-88, (1989).

Abstract: Ocean mining is just beginning in the United States. What can local governments expect from a recent federal initiative to promote it? This article examines ocean mining and what factors will cause its growth in the US coastal zone. It also discusses the general impacts expected by local governments and suggests what is necessary to accommodate ocean mining within coastal localities.

Structuring a U.S. offshore hard mineral development policy: Reflections on a seabed tenure system.
Fischer, D. W. Grad. Cent. Public Policy, California State Univ., Long Beach, CA 90840, USA
OCEAN DEV. INT. LAW, vol. 19, no. 1, pp. 59-71, (1988).

Abstract: U.S. jurisdiction more than doubled in 1983 when President Reagan proclaimed sovereign rights over an area extending 200 nautical miles from the U.S. coastline. A major question facing the nation is the definition of the land tenure system for the seabed in this area before any mineral recovery takes place. This paper summarizes the four basic regimes defining mineral tenure today and reflects on selected considerations for use in defining the seabed tenure system.

The needs of users of EEZ mapping and research.
Griles, J. S. U. S. Dep. Inter., Washington, DC, USA
Geological Survey Circular, C-1018, 11-12, 1988.

Descriptors: *ocean floors/mineral resources/mineral exploration/USGS/United States Exclusive Economic Zone; exploration/cartography/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Ocean science and engineering.
Gross, M. G. Natl. Sci. Found., Washington, DC, USA
Geological Survey Circular, C-1018, 13-14, 1988.

Descriptors: *ocean floors/mineral resources/mineral exploration/USGS/exploration/United States Exclusive Economic

Zone/technology/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Swath mapping data management within the National Oceanic and Atmospheric Administration.
Herlihy, D. R.; S. P. Matula; C. Andreasen. NOAA, 6001 Executive Blvd., Rockville, MD 20852, USA
INT. HYDROGR. REV, vol. 65, no. 2, pp. 55-74, (1988).

Abstract: In 1983, the United States proclaimed the establishment of a maritime Exclusive Economic Zone (EEZ) extending beyond the territorial sea to a distance of 200 nautical miles from its coastline. The proclamation reserved for the U.S. the sovereign right to explore for, exploit, conserve, and manage all natural resources within this new 3.4 million square nautical mile territory, an area roughly 1.2 times the total U.S. land mass. In order to help determine the characteristics and resources of the U.S. EEZ, a detailed program was developed to systematically map the entire area using multi-beam swath sounding systems. The program is under the direction of the National Oceanic and Atmospheric Administration (NOAA), United States Department of Commerce. Field operations commenced in early 1984 as two NOAA ships, equipped with advanced bathymetric swath mapping and precision navigation capabilities, began surveying off the coast of central California.

EEZ GOVERNANCE IN AUSTRALIA, CANADA, THE UNITED STATES AND NEW ZEALAND.
Hildreth, R. G.Univ of Oregon Sch of Law, Eugene, OR, USA
Coastal Zone '87, v 3. Publ by ASCE, New York, NY, USA, pp. 3414-3429, 1987.

Abstract: All four nations listed in the title claim 200-mile exclusive resource zones based on the 1982 Law of the Sea Convention's exclusive economic zone (EEZ) and continental shelf provisions. These relatively new zones have been superimposed upon the more traditional marine zones recognized by international law - internal waters, territorial sea, contiguous zone, and continental shelf - and an English common law heritage. Constitutional arrangements with respect to federal-state (Australia, United States) and federal-provincial (Canada) roles offshore historically have followed remarkably similar paths that now are diverging in important ways which are the focus of this paper. New Zealand illustrates progressive EEZ management uncomplicated by the difficult federalism questions present in the other three. Australia and Canada illustrate creative approaches to overcoming EEZ federalism issues that have hindered improvements in United States EEZ management. From these experiences, suggestions for restructuring U. S. EEZ governance are derived. (Author abstract) 5 refs.

CONSERVATION OF MARINE AND ESTUARINE AREAS IN A FEDERAL SYSTEM.
Hildreth, R. G.;A. Ivanovici.Univ of Oregon, Sch of Law, Eugene, OR, USA
Coastal Zone: Proceedings of the Symposium on Coastal and Ocean Management 1985 v 2. Publ by ASCE, New York, NY, USA, pp. 2014-2025, 1985.

Abstract: The 1982 United Nations Law of the Sea (LOS) Convention of customary international law now provide coastal nations like the United States and Australia with a 200-mile Exclusive Economic Zone (EEZ) plus adjacent continental shelf if it extends beyond 200 miles. Prior to the LOS Convention, both the U. S. and Australia had enacted legislation authorizing the establishment of marine protected areas as far seaward as the edge of the continental shelf. 21 refs.

The USGS marine geology program in the Exclusive Economic Zone. 17. Annual Offshore Technology Conference Houston, TX (USA) 6-9 May 1985.
Hill, G. W.
PROC. OFFSHORE TECHNOL. CONF,vol. 2, pp. 53-56, 1985.

Abstract: The Exclusive Economic Zone (EEZ) was established by Presidential proclamation in 1983, resulting in an expansion of the national domain by extending the limit of federal jurisdiction to 200 nautical miles offshore. The area of the EEZ, about 3 billion acres, is approximately 130% larger than the onshore U.S. lands. The United States Geological Survey's marine program in the EEZ provides for the orderly exploration necessary to develop an integrated comprehensive scientific understanding of this new frontier. The USGS EEZ program serves this national need by developing or extending our understanding of where mineral or petroleum resources occur, in what geologic framework such resources may exist, the geologic environmental conditions that may affect their future use, and how their formation in oceanic areas can help in the search for analogous onshore deposits of economic significance.

Small-scale mapping of the Exclusive Economic Zone using wide-swath side-scan sonar.
Hill, G. W.; B. A. McGregor. US Geol. Survey, Reston, VA, USA
Mar. Geod. (USA) vol.12, no.1, pp.41-53, 1988.

Abstract: The US Geological Survey (USGS) started a program in April 1984 to map the deep-water (greater than 200 m) areas of the US Exclusive Economic Zone (EEZ) at a reconnaissance scale as a first effort to develop a geologic understanding of the new national offshore territory. A unique side-scan sonar system named GLORIA (Geological Long-Range Inclined Asdic) developed by IOS is used. To date, over 3,500,000 km/sup 2/ have been mapped off the west coast, the east coast, the Island of Hawaii, Puerto Rico, and the US Virgin Islands and in the Gulf of Mexico and the Bering Sea. All of these surveys have been highlighted by discoveries of major geologic features that contribute to our understanding of basic geologic principles and processes, composition and character of marine rocks/sediments, and assessment of nonliving marine resources and geohazards. This program provides 'roadmaps' and 'guideposts' for subsequent, more detailed studies of specific features or areas.

Milestones in the EEZ; past and present.
Hill, G. W. U. S. Geol. Surv., USA
Sea Technology 29: 1,38, 1988.

Descriptors: *United States/oceanography/ocean floors/United States Exclusive Economic Zone/maps/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Seafloor exploration and characterization; prerequisite to ocean space utilization. The ocean; an international workplace; proceedings
Hill, G. W.; M. Lockwood; P. Meyboomet, et. al. U. S. Geol. Surv., Reston, Va, USA; Dep. Natl. Def., CAN; Natl. Oceanic and Atmos. Admin., USADep. Fish. and Oceans, Ottawa, ON, CAN.
Oceans (New York) 1-5Halifax, NS, Canada, Sept. 28-Oct. 1, 1987. pp.724-729, 1987.

Descriptors: *United States/*maps/oceanography/cartography/continental margin/bathymetric maps/United States Exclusive Economic Zone/ocean floors/legislation/Law of the Sea/methods/exploratio/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Offshore lands of the USA: The US Exclusive Economic Zone, continental shelf and outer continental shelf.
Holser, A. F. Off. Strategic and Int. Minerals, Minerals Manage. Serv., Dep. of the Interior, 1951 Kiowel Dr., Suite 601, Vienna VA 22180, USA
MARIT. POLICY MANAGE, vol. 15, no. 1, pp. 2-8, (1988).

Abstract: Confusion exists regarding definitions of and the interrelationships between the US Exclusive Economic Zone (EEZ), the geological and legal (juridical) continental shelf, the US continental shelf, the Outer Continental Shelf (OCS), and the OCS Planning Areas. The background of these terminologies is discussed, and the extent of overlap and non-overlap of some of these areas is demonstrated in tables and a map. The discussion is limited to considerations applicable to mineral resources. Issues relating to fisheries and other resources, and navigation and other aspects of maritime law are not covered.

The accuracy and politics of seafloor mapping.
Huyghe, P.
Oceans 19: 6,22-29, 1986.

Descriptors: *United States/*ocean floors/*maps/*mineral exploration/economic geology/mineral resources/oceanography/cartography; programs/continental margin/exploration/marine geology maps/policy; strategic minerals/United States Exclusive Economic Zone/offshore; North American Atlantic/North Atlantic/North American Pacific; Pacific Ocean/Gulf of Mexico/Atlantic Ocean/marine geology; bathymetry/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/26 (ECONOMIC GEOLOGY/GENERAL & MINING)

Resource development in the EEZ: Lead or follow, the time has come.
Inouye, D. K. U.S. Senate, Washington, DC, USA
SEA TECHNOL, vol. 28, no. 6, p. 36, (1987).

Abstract: In Fiscal Year 1984, the United States spent approximately $1.197 billion on oceanographic research, compared to approximately $12.664 billion on space exploration and research. In Fy 85, we spent $1.477 billion on oceanographic research and approximately $15.236 billion on the space program. In Fy 86, the gap grew wider, with $1.508 billion spent on oceanographic research and $16.721 billion on space R & D. The federal government now must play an equally active role in developing the resources of the EEZ for national and economic security. The Law of the Sea Treaty, which opened the doors for nations to proclaim an Exclusive Economic Zone, became a two-edged sword. While the wealth of ocean resources in the EEZ raises hopes for enhanced national productivity, our national security is threatened by uses other countries are making of their EEZs.

Ocean policy issues and the 100th Congress.
Jones, W. B. House Comm. Merchant Mar. and Fish., U.S. Congress, Washington, DC, USA
SEA TECHNOL, vol. 28, no. 1, pp. 21-22, (1987).

Abstract: High on the agenda of The House Committee on Merchant Marine and Fisheries is the development and enactment of legislation that will stem the decline of the merchant fleet, and promote investment in this most vital use of our ocean seas. For those industries dependent on federal government programs, the prognosis for programmatic expansions is quite grim. Projected government deficits continue to haunt our every move. The Sea Grant College Program, of major importance to marine industries and university research efforts, is up for reauthorization this year. The realities of the budget situation may restrict any efforts beyond preservation of the status quo. The Ocean Thermal Energy Conversion licensing program is also subject to renewal, but any efforts to reinstitute significant government financial support for OTEC will depend on private sector demonstrations of economic viability for this promising technology. During this Congress, the Committee will maintain close oversight of continuing efforts to explore and survey the Exclusive Economic Zone.

Workshop 7; Information needs and availability for oil and gas leasing, exploration, and development of the EEZ.
Kallaur, C. L.(chairperson);C. H.(chairperson) Savit. U. S. Miner. Manage. Serv., Washington, DC, USA; Consultant, USA
Geological Survey Circular, C-1018, 115-123, 1988.

Descriptors: *Pacific Coast/*continental shelf/*Eastern U.S./*Pacific Ocean; *Atlantic Ocean/*Gulf of Mexico/oceanography/economic geology/fuel resources/USGS/United States Exclusive Economic Zone/land leases/petroleum/natural gas/outer shelf/North American Pacific; offshore/Alaska/Western U.S./United States/North American Atlantic/North Atlantic/29 (ECONOMIC GEOLOGY/ENERGY SOURCES)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Proceedings: National Conference on the States and an Extended Territorial Sea, December 9-11, 1985.
King, L. R.; A. Broussard. Texas A&M Univ., College Station (USA). Sea Grant Coll. Program
REP. TEX. A&M UNIV. SEA GRANT PROGRAM, 178 p., 1987.

Abstract: One result of the United Nations Law of the Sea Treaty was a growing international consensus on a 12-nautical mile territorial sea. Although the United States refused to sign the treaty, the prospect of an expanded territorial sea was left open as a result of President Reagan's March 10, 1983, Proclamation of a 200-mile Exclusive Economic Zone for the United States. Contemplation of such an extension would include an assessment of the implications for the relations between the states and the federal government, particularly in terms of management responsibilities, allocation of wealth, and international relations. To explore this issue, this conference was convened. Marine law specialists and representatives from state and federal agencies were invited to analyze and speculate on the political and legal implications of extending the United States' territorial sea from three to 12 miles.

The juridical ocean basin. The western North Atlantic region <Collective> The geology of North America.
Knauss, J. A.; P. R.(EDITOR) Vogt; B. E.(EDITOR) Tucholke. Univ. R.I., Grad. Sch. Oceanogr., Kingston, RI, USA; Woods Hole Oceanogr. Inst., USA; Nav. Res. Lab., Washington, DC, USA677-687, 1986.

Descriptors: *mineral resources/economics/Law of the Sea/legislation/United States Exclusive Economic Zone; world ocean/26

(ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

"A concerted partnership".
Konop, D. External Aff. Off. Natl. Ocean Serv., NOAA, Washington, DC, USA
SEA TECHNOL, vol. 26, no. 2, pp. 12-17, 1985.

Descriptors: NOAA/Exclusive Economic Zone/site surveys/<Geographic> USA Coasts/research programs/U.S. Geological Survey/2102

Identifying oceanographic data gaps in the EEZ. Oceans '86 "Science-Engineering-Adventure" Washington, DC (USA) 23-25 Sep 1986.
Lockwood, M.; D. Hamilton. NOAA, Natl. Ocean Serv., Charting and Geod. Serv., 6001 Executive Blvd., Rockville, MD 20852, USA
OCEANS '86, pp. 1359-1364, 1986.

Abstract: The issuance of the Presidential Proclamation on the Exclusive Economic Zone (EEZ) in March of 1983 has resulted in an appraisal of the state of knowledge of oceanographic data in the coastal waters within 200 miles of the United States and its territorial possessions. This appraisal revealed a significant gap in our knowledge of the region in certain ocean parameters and in certain frontier areas, i.e. Alaska and Pacific Trust territories. An analysis of the data holdings in the National Oceanographic Data Center, several reviews held by the National Oceanic and Atmospheric Administration, the Department of the Interior, and the National Advisory Committee on Oceans and Atmosphere have further verified these data gaps and the impacts of these gaps on the mandate to explore and assess the resources of the EEZ.

Proceedings of the 1987 Exclusive Economic Zone symposium on mapping and research; planning for the next 10 years.
Lockwood, M. E.; B. A.(EDITOR) McGregor. NOAA, Rockville, MD, USA; U. S. Geol. Surv., USA
Geological Survey Circular, C-1018, 175, 1988.

Descriptors: *symposia/*economic geology/*oceanography/*associations/*survey organizations/*maps/*ocean floors/*United States/*Atlantic Ocean; *Pacific Ocean/mineral resources/current research/cartography/United States Exclusive Economic Zone/NOAA/U. S. Geological Survey; mineral exploration/USGS/exploration/offshore/North American Atlantic/North Atlantic/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Navy ponders a total ban on bathymetry.
Maggs, W. W. Amer. Geophys. Union, Washington, DC, USA
Eos, Transactions, American Geophysical Union 69: 46,1571-1573, 1988.

Descriptors: *ocean floors/*oceanography/bottom features/research/exploration/controls/United States Exclusive Economic Zone; bathymetry/Seabeam/regulation/United States/national security; Atlantic Ocean/Pacific Ocean/acoustical methods/geophysical methods/U. S. Navy/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Coastal Zone 85: Proceedings of the Symposium on Coastal and Ocean Management (4th) (Post Conference Volume). Held in Baltimore, Maryland, July 30-August 2, 1985. Final rept.
Magoon, O.; H. Converse; L. T. Tobin. Coastal Zone Foundation, San Francisco, CA; 859p, Jul 88.

Abstract: The document contains plenary presentations and technical papers by conference participants concerning Coastal and Ocean Management including topics relating to engineering and science; data gathering and monitoring; law and politics; planning, conservation and development; regulation and citizen participation; and social science. Included are more than seventy-five presentations which discuss such topics as coastal zone management activities in Sri Lanka, Venezuela, Japan, Brazil, Australia, Netherlands and many areas of the U.S.; oil spills; the Coastal Barrier Resources Act; Federal Consistency; offshore oil and gas; fisheries; shoreline processes and protection; urban waterfronts; wetlands; sea level change; marine and estuarine reserves; Chesapeake Bay studies and protection measures; coastal habitat protection and mitigation; the Exclusive Economic Zone; CZM legislation; the public trust; and Corps of Engineers activities, among others.

Marine policy for America.
Mangone, G. J.
New York, NY: Taylor & Francis, 365p., 1988.

Descriptors: *United States/oceanography/marine geology/Law of the Sea/legislation/United States Exclusive Economic Zone/international law/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Marine Minerals: Exploring Our New Ocean Frontier.
Office of Technology Assessment.
Washington, DC: Office of Technology Assessment, 349p., Jul 87.

Abstract: The report on exploring the Exclusive Economic Zone (EEZ) for its mineral potential is in response to a joint request from the House Committee on Merchant Marine and Fisheries and the House Committee on Science, Space, and Technology. It examines the current knowledge about the hard mineral resources within the EEZ, explores the economic and security potential of seabed resources, assesses the technologies available to both explore for and mine those resources, identifies issues that face the Congress and the executive branch, and finall presents options to the Congress for dealing with these issues.

Mapping and research in the Exclusive Economic Zone.
McGregor, B. A.; M. Lockwood. NOAA, USA U. S. Geol. Surv., USA, 40p., 1985.

Descriptors: *United States/*Pacific Ocean/*Atlantic Ocean/*survey organizations *associations/*Bering Sea/economic geology/oceanography/current research/mineral resources/ocean floors/fuel resources/polymetallic ores/U. S. Geological Survey/NOAA/USGS/maps/cartography/Exclusive Economic Zone/popular geology/elementary geology/nodules/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Confidential classification of multi-beam bathymetric mapping of the U.S. EEZ: Is a new U.S. marine scientific research policy in order?

McLaughlin, R. J. Coast. and Mar. Law Res. Program, Mississippi/Alabama Sea Grant Consort., Univ. Mississippi, University, MS 38677, USA
OCEAN DEV. INT. LAW, vol. 19, no. 1, pp. 1-34, (1988).

Abstract: This article proposes a reexamination of current U.S. MSR policy in light of the recent U.S. decision to give NOAA produced multi-beam bathymetric maps of the U.S. EEZ a security classification of "confidential." The author argues that present U.S. policy is not effectively influencing the MSR policies of other coastal states and is not fully protecting U.S. security and economic interests. A policy which requires foreign research vessels to give notice and to agree to share data prior to working within the U.S. EEZ is suggested as a more appropriate alternative.

Oceans and the future...where are we going?
Mikulski, B. A. Subcomm. on Oceanogr., House Merchant Mar. and Fish. Comm. Annapolis, MD 21402, USA
SEA TECHNOL, vol. 27, no. 1, pp. 24, 27, (1986).

Abstract: Potential benefits of marine biotechnology research and development are immense. We were told that marine biotechnology will be a multi-billion dollar industry by the year 2000. Currently, the U.S. fishing industry has an annual trade deficit of $5 billion. Biotechnology may help the situation by improving fish production, fisheries management and using waste byproducts. The technology can also be used to develop new drugs and chemicals from the sea and help us solve the problems of pollution. The United States is currently the world leader in biotechnology. In 1983, President Reagan proclaimed a 200-mile Exclusive Economic Zone (EEZ) for the United States. The total seabed area encompassed in the EEZ proclamation is 3.9 billion acres (compared to the total onshore area of the U.S. and its territories of 2.3 billion acres). Commercial development of the resources is coming in the near future. A comprehensive strategy must be in place by that time that will best allow for commercial development while still protecting our environmental resources.

The Need for a National Plan of Scientific Exploration for the Exclusive Economic Zone. A Special Report to the The President and The Congress.
National Advisory Committee on Oceans and Atmosphere.
Washington, D.C.: NACOA, 53p., June 1986.

Navy relents in battle over mapping sea floor.
Norman, C.
Science 244: 4900, 25, 1989.

Descriptors: *United States/*maps/*Pacific Ocean/*Atlantic Ocean/oceanography/cartography/ocean floors/continental margin/NOAA/North American Atlantic/North Atlantic/North American Pacific/topography/sonar methods/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Nation's ocean minerals stake lies in regulations.
Pendley, W. P. Comiskey and Hunt, Attorneys at Law, Washington, DC, USA
OCEAN IND, vol. 21, no. 1, pp. 38-39, (1986).

Abstract: On March 10, 1983, President Reagan brought under United States control a new ocean frontier. On that date, the nation joined more than 50 others which had earlier proclaimed an Exclusive Economic Zone (EEZ) and with it obtained sovereign rights to resources of the sea and seabed. With this single action, President Reagan nearly quadrupled U.S. ocean jurisdiction, laying claim to the ocean resources out 200 miles off the coasts of its 50 states and trust territories for the purpose of exploring, developing, conserving and managing minerals and other natural resources of the ocean. Laws and the regulations adopted to implement exploration of vast mineral deposits in the ocean will play a major role in expanding economic opportunities of the sea.

Strategic and critical mineral development in the Exclusive Economic Zone: Solutions and strategies. Oceans '86 "Science-Engineering-Adventure" Washington, DC (USA) 22-25 Sep 1986.
Pendley, W. P. Comiskey and Hunt, 4023 Chainbridge Rd., Fairfax, VA 22030, USA OCEANS '86, pp. 296-301, 1986.

Abstract: The author addresses the evolving regulatory scheme being developed by the Department of the Interior to permit mining for non energy resources in the Exclusive Economic Zone of the United States under the Outer continental Shelf Lands Act of 1953. He compares and contrasts OCS Lands Act statutory scheme, as implemented with draft regulations, with Deep Seabed Hard Mineral Resources Act and onshore mineral development authorities. He also discusses the alternative of potential enactment of new statutory authority, with delay and dislocations involved in the legislative process. The regulatory scheme is discussed in detail, exploring potential problems and offering solutions.

Multi-beam surveys of the U.S. Exclusive Economic Zone. 1. Biennial Canadian Hydrographic Conference. Hydrography and Technology in the Mid - 80's (How Well Are They Working Together?) Halifax, N.S. (Canada) 16- 18 Apr 1985.
Perry, R B. NOAA, Natl. Ocean Serv., 6001 Executive Blvd., Rockville, MD 20852, USA, pp. 53-57, 1986.

Abstract: The NOAA National Ocean Service has begun a long-range program to map selected portions of the U.S. Exclusive Economic Zone (EEZ). New surveys will utilize the Bathymetric Swath Survey System (BS super(3)) on the NOAA Ship Davidson) out to 600 meters depth, as well as the Sea Beam system on the NOAA Ship Surveyor in waters over 600 meters depth. These multi-beam systems map a swath of the sea floor, with the BS super(3) covering up to 1/2 times and the Sea Beam) up to 75% of the water depth. The first EEZ surveys began in 1984 off the northern California coast to the south and are now being extended to areas off Oregon. Survey coverage extends from 150 meters depth out to approximately 3,500 meters depth. This new mapping program is conducted in cooperation with the U.S. Geological Survey, with priorities and funding set through joint discussions. Present plans are to continue work in the West Coast EEZ to cover the outermost continental shelf, slope, and upper rise, with an expansion of the program to other areas as multi-beam system and ship time become available.

Delimitation of maritime boundaries: Continental shelf and Exclusive Economic Zone, in light of the Gulf of Maine case, Canada v. U.S.A. (1984).
Pharand, D. Fac. Law, Univ. Ottawa, Ottawa, Ont., Canada

REV. GEN. DROIT (CAN.), vol. 16, pp. 363-386, 1985.

Abstract: The international law applicable to maritime boundary delimitation is very imprecise and, consequently, decisions of international tribunals are of the utmost importance. The recent decision of a Chamber of the International Court of Justice in the Gulf of Maine Case, between Canada and the United States, makes a significant contribution to the development and clarification of the applicable law. The Chamber's judgment, which is considered as one rendered by the Court itself, clarifies the difference between principles and rules of international law, on the one hand, and equitable criteria and practical methods, on the other. Principles of law are limited to a few basic norms, such as the obligation to seek an agreement and, if one cannot be reached, to have recourse to third party procedure with a view to arriving at an equitable delimitation by taking all relevant circumstances into account. Equitable criteria, such as the geographical configuration of the area, and practical methods, such as that of equidistance, are numerous and vary with each concrete situation.

Overview of NOAA's Exclusive Economic Zone survey program. Oceans '85 "Engineering and the Environment" San Diego, CA (USA) 12-14 Nov 1985.
Pryor, D. E. Off. Charting and Geod. Serv., Natl. Ocean Serv., NOAA, 6001 Executive Blvd., Rockville, MD 20852, USA
OCEANS '85, vol. 2, pp. 1186-1189, 1985.

Abstract: NOAA's National Ocean Service has begun a new program of mapping the ocean floor within the United States' Exclusive Economic Zone. The program will produce base maps to support the exploration, exploitation, conservation and management of natural resources in this vast area which is now under national sovereignty. This is a cooperative effort with the United States Geological Survey and a part of a Federal program in support of the Exclusive Economic Zone. The primary mission of the program is to produce accurate, high resolution bathymetric data using modern multibeam swath mapping systems. NOAA is currently applying its two systems -- a Sea Beam and a Bathymetric Swath Survey System (BS super(3)) -- to this task.

Coastal states and marine resource development within the United States exclusive economic zone.
Slade, D. C. Coastal States Organ, USA
Oceans '88 Proc Partnership Mar Interest v 3. Publ by IEEE, New York, NY, USA. Available from IEEE Service Cent (cat n 88CH2585-8), Piscataway, NJ, USA. p 1006-1011, 1988.

Abstract: In 1983, the US established, by presidential proclamation, the US exclusive economic zone (US EEZ). Within this maritime zone the US has internationally recognized authority to control its domestic resource management, and to regulate, or prohibit outright, foreign activities such as fishing, oil and gas development, mining ocean minerals, or any other economic activity. The impact and significance of the EEZ for the coastal states are examined, emphasizing the conflict between the states and the federal government. 22 Refs.

Current status of leasing proposals for the U.S. Exclusive Economic Zone. 17. Annual Offshore Technology Conference Houston, TX (USA) 6-9 May 1985.
Smith, J. B.; B. R. Holt; R. G. Paul.
PROC. OFFSHORE TECHNOL. CONF, vol. 2, pp. 9-18, 1985.

Abstract: The office of Strategic and International Minerals of the Minerals Management Service, Department of the Interior, has been established to develop a leasing program for nonenergy minerals in the outer continental shelf/Exclusive Economic Zone (OCS/EEZ) of the United States. The Minerals Management Service is working closely with several states through joint federal/state task forces to conduct a case-by-case leasing program that is environmentally sound and safe. This paper provides an overview of the program, reviews the current status of leasing proposals, and describes future program initiatives now under consideration.

Coastal zone management and development of the Exclusive Economic Zone. Oceans '86 "Science-Engineering-Adventure" Washington, DC (USA) 23-25 Sep 1986.
Stanley, E. D.,Jr.
OCEANS '86, pp. 636-642, 1986.

Abstract: It is now clear that the authors must consider that there is a meaningful variation in the marine environment and in the available marine resources as between their country's several natural ocean regions. The environments of these ocean regions impact on, and man's use of their resources are managed from, the bordering coastal area. As between the several ocean regions the coastal zones also differ, in terms of their social, economic, and political character. Is seems that oversight of the management of the coastal zone and the EEZ is best organized on a regional basis with joint federal and state consultation and coordination of plans and activities.

NOAA's role: Assessment, research, and management. 10. Natl. Conf. Estuar. and Coast. Manage., Tools of the Trade New Orleans, LA (USA) 12 -15 Oct 1986.
Tippie, V. K. NOAA, 1825 Connecticut Ave., Washington, DC 20009, USA, pp. 43-46, 1987.

Abstract: From the federal perspective, NOAA is primarily a science agency in contrast to EPA or the COE which are the principal regulatory agencies. However, NOAA does have some regulatory authority limited for the most part to fisheries within the Exclusive Economic Zone. As the nation's leading civilian marine science agency, NOAA provides the primary federal focus for estuarine studies in support of sound management practices.

Workshop 6; Technology needs to characterize the EEZ.
Tyce, R. C.(chairperson); D. E.(chairperson) Pryor. Univ. R.I., Narragansett, RI, USA; NOAA, USA
Geological Survey Circular, C-1018, 101-114, 1988.

Descriptors: *ocean floors/mineral resources/mineral exploration/USGS/United States Exclusive Economic Zone; exploration/technology/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

NOAA's new program of ocean services. 17. Annual Offshore Technology Conference Houston, TX (USA) 6-9 May 1985.
Wolff, P. M.; D. Konop.

PROC. OFFSHORE TECHNOL. CONF, vol. 2, pp. 57-60, 1985.

Abstract: The National Ocean Service, a component of the National Oceanic and Atmospheric Administration, has a new program for providing ocean products and services to the Nation. The key objective in this program are six-fold: (1) provide ocean products and services that are more responsive to the needs of users, (2) modernize the instrumentation systems needed to collect, process, and disseminate ocean information, (3) increase cooperation with other government agencies and the private sector, (4) improve the efficiency of NOAA's fleet or research and survey ships, (5) survey the U.S. Exclusive Economic Zone, and (6) determine the baseline status and trends in the ocean environment.

Mapping of the seafloor; progress and the plan.
Wolff, P. M. NOAA, Washington, DC, USA
Geological Survey Circular, C-1018, 21-24, 1988.

Descriptors: *ocean floors/mineral resources/mineral exploration/USGS/exploration/United States Exclusive Economic Zone/cartography/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

The need for mapping and research of the seabed-subsoil of the EEZ.
Ziglar, J. W. U. S. Dep. Inter., Washington, DC, USA
Geological Survey Circular, C-1018, 5-6, 1988.

Descriptors: *ocean floors/mineral resources/mineral exploration/USGS/United States Exclusive Economic Zone; exploration/cartography/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

II. RESOURCES

Distribution of seafloor shallow gas in the northwestern Gulf of Mexico. 19. Annual Offshore Technology Conference Houston, TX (USA) 27- 30 Apr 1987.
Anderson, A. L.; W. R. Bryant. Texas A&M Univ., College Station, TX 77843, USA
PROC. OFFSHORE TECHNOL. CONF, pp. 295-300, 1987.

Abstract: Pockets of free gas at shallow depths in the seafloor are known to be potential hazards to development of offshore oil and gas resources. Identification of such pockets is one goal of hazard surveys. Data from several such surveys have been used to map and statistically describe the occurrence of gas in the continental shelf sediments of this region. Sizes, locations and depth of occurrence of the gas pockets are described for this region and are compared with other regions including offshore southern California.

Ocean engineering, resource development: A national plan?
Anon.
SEA TECHNOL, vol. 28, no. 6, p. 41, (1987).

Abstract: A major goal of the Hawaii conference was to bring together leaders from industry, government, and academic communities to assess the potential of ocean resources in the U.S. EEZ. A team of participants met later in Kailua-Kona, Hawaii, on October 22-23, 1986, to develop recommendations to NSF for initiating a research program in ocean technology. Results from the conference and this workshop form the basis of a national plan for looking at the technology and engineering needs to develop those oceanic resources. A major undertaking was the identifications of critical technologies which, if made available through engineering research, would enable expanded commercial utilization of these resources. Emphasis was also placed on systems to foster the creation of new industries, or increase the capabilities of existing firms, to compete in international commerce.

Geology and petroleum potential of Mesozoic and Cenozoic rocks, offshore Virginia
Bayer, K. C.; R. C. Milici. Va. Div. Miner. Resour., Charlottesville, VA, USA.
Virginia Division of Mineral Resources Publication No.111, 1987.

Descriptors: *Virginia/economic geology/oceanography/petroleum/continental shelf/Southeastern U.S./Eastern U.S./United States/possibilities/Atlantic Coastal Plain/North America/Mesozoi; Cenozoic/continental margin/seismic surveys/geophysical surveys; velocity structure/29 (ECONOMIC GEOLOGY/ENERGY SOURCES)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Assessment of nonenergy mineral potential in offshore Alabama; Phase I, Analysis of available geophysical and sample data.
Bearden, B. L.; W. E. Smith; B. H. Tew, et. al. Geol. Surv. Ala., University, AL, USA.
Proceedings - Gulf of Mexico Information Transfer Meeting New Orleans, LA, United States, Dec. 1-3, 1987. pp.367-370, 1987.

Descriptors: *Alabama/*mineral exploration/economic geology/oceanography/geophysical surveys/mineral resources/continental shelf/surveys/Southern U.S./United States/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Geology and petroleum potential of the Southeast Alaska continental margin. Geology and resource potential of the continental margin of western North America and adjacent ocean basins, Beaufort Sea to Baja California.
Bruns, T. R.; P. R. Carlson; D. W.(EDITOR) Scholl, et. al. U. S. Geol. Surv., Menlo Park, CA, USA
Circum-Pacific Council for Energy and Mineral Resources, Earth Science Series 6, 269-282, 1987.

Descriptors: *Alaska/*Pacific Ocean/oceanography/geophysical surveys/economic geology/continental margin/seismic surveys/petroleum/Western U.S./United States/southeastern Alaska/reflection/multichannel methods; Fairweather-Queen Charlotte fault zone/Dixon Entrance/structural traps/traps/tectonics/faults/Tertiary/source rocks/reservoir rocks/sedimentary rocks/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/29 (ECONOMIC GEOLOGY/ENERGY SOURCES)/20 (GEOPHYSICS/APPLIED)

Geology and petroleum potential of the Shumagin margin, Alaska. Geology and resource potential of the continental margin of western North America and adjacent ocean basins, Beaufort Sea to Baja California.
Bruns, T. R.; R. von Huene; R. C. Culotta, et. al. U. S. Geol. Surv., Menlo Park, CA, USA; Lamont-Doherty Geol. Obs., USA; U. S. Geol. Surv., Menlo Park, CA, USA.

Circum-Pacific Council for Energy and Mineral Resources, Earth Science Series 6, 157-189, 1987.

Descriptors: *Alaska/oceanography/economic geology/geophysical surveys/continental margin/petroleum/seismic surveys/Shumagin/Western U.S; United States/reflection/multichannel methods/Border Ranges Faul; Miocene/Neogene/Tertiary/Cretaceous/Paleocene/Paleogene; Shumagin Basin/Sanak Basin/Unimak Basin/Unimak Ridge/extension faults/faults/terranes/tectonostratigraphic units/Alaska Peninsul/29 (ECONOMIC GEOLOGY/ENERGY SOURCES)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Non-living EEZ resources: Minerals, oil and gas.
Champ, M. A.;et al.
ENERGY REV, vol. 12, no. 2, p. 54, 1985.

Abstract: Sand and gravel, placers, phosphorites, manganese nodules, cobalt-ferro-manganese crusts, and polymetallic sulfides have been identified as the major hard-mineral resources in the U.S. Exclusive Economic Zone (EEZ) that extends 200 nautical miles from its coast. Offshore oil and gas production from the EEZ is worth $26 billion annually. In 1983, offshore gas production accounted for aroung 24% of total U.S. production and offshore oil production accounted for about 11%. The offshore area contains between 26 and 41% of the oil and 25 and 30% of the gas in U.S. undiscovered resources, according to the U.S. Geological Survey. (Oceanus, 27 (4), Winter 1984-85, 28-34).

Geology, petrology, and mineral potential of the Gorda Ridge. Geology and resource potential of the continental margin of western North America and adjacent ocean basins, Beaufort Sea to Baja California.
Clague, D. A.; M. L. Holmes; D. W.(EDITOR) Scholl; et. al. U. S. Geol. Surv., Menlo Park, CA, USA
Circum-Pacific Council for Energy and Mineral Resources, Earth Science Series 6, 563-580, 1987.

Descriptors: *Pacific Ocean/*lava/oceanography/geophysical surveys/composition/marine geology/acoustical surveys/chemical composition/maps/Gorda Rise/United States Exclusive Economic Zone/offshore/Northern California/southern Oregon/Oregon/Pacific Coast/Western U.S.; United States/California/SeaMARC/side-scanning methods; geophysical maps/areal geology/Escanaba Trough/metal ores; sulfides/spreading centers/hydrothermal processes/mineralization|on/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)/27 (ECONOMIC GEOLOGY/METALS)

Cobalt-rich manganese crust potential of the U.S. Trust and Affiliated Territories.
Clark, A. L.; C. J. Johnson. Resour. Syst. Inst., East-West Cent., Honolulu, HI, USA
Proceedings - Offshore Technology Conference 18: 3,111-118, 1986.

Descriptors: *nodules/*East Pacific Ocean Islands/*Micronesia/manganese composition/economic geology/oceanography/cobalt ores/United States Exclusive Economic Zone/manganese crusts; Marshall Islands/Mariana Islands/Johnston Island/Wake/Guam; resources/27 (ECONOMIC GEOLOGY/METALS)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Geology of the California continental margin north of Cape Mendocino. Geology and resource potential of the continental margin of western North America and adjacent ocean basins, Beaufort Sea to Baja California.
Clarke, S. H., Jr; D. W.(EDITOR) Scholl; A. E. Grantz, et. al. U. S. Geol. Surv., Menlo Park, CA, USA
Circum-Pacific Council for Energy and Mineral Resources, Earth Science Series 6, 337-351, 1987.

Descriptors: *California/*Pacific Ocean/areal geology/oceanography/economic geology/maps/continental margin/petroleum/geologic maps/Pacific Coast; Western U.S./United States/Cape Mendocino/Eel River basin; terranes/allochthons/Pleistocene/Quaternary/source rocks; reservoir rocks/Gorda Plate/tectonics/deformation/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/29 (ECONOMIC GEOLOGY/ENERGY SOURCES)

Rare earth elements in ferromanganese deposits from the Hawaiian Archipelago and neighboring seamounts within the Exclusive Economic Zone. AGU 1985 fall meeting.
de Carlo, E. H.;G. M. McMurtry. Univ. Hawaii, Dep. Chem., Honolulu, HI, USA
Eos, Transactions, American Geophysical Union 66: 46,1083, 1985.

Descriptors: *Pacific Ocean/oceanography/ocean floors/United States Exclusive Economic Zone/Hawaii/East Pacific Ocean Islands/Polynesia/United States/seamounts/nodules; ferromanganese composition/rare earths/trace elements/geochemistr; emission spectra/mineral composition/sedimentation/environment; hydrothermal conditions/02 (GEOCHEMISTRY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Gas hydrates on the Northern California continental margin.
Field, M. E.; K. A. Kvenvolden. U. S. Geol. Surv., Menlo Park, CA, USA.
Geology (Boulder) 13: 7, 517-520, 1985.

Descriptors: *California/*Pacific Ocean/*organic materials/*sediments/oceanography/geophysical surveys/economic geology/hydrocarbons; marine sediments/continental shelf/seismic surveys/natural gas/methane/United States/Northern California/North American Pacific/continental margin/plateaus/offshore/possibilities/acoustical surveys; reflection methods/seismic methods/gas hydrates/hydrates/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Marine minerals in the Pacific.
Glasby, G. P. Dep. Sci. and Ind. Res., N.Z. Oceanogr. Inst., Wellington, NZL
Oceanography and Marine Biology 24,1-64, 1986.

Descriptors: *Pacific Ocean/economic geology/mineral resources/Pacific Basin/copper ores/metal ores/lead-zinc deposits/bauxite/silver ores/nickel ores/tin ores/iron ores/coa; organic residues/cobalt ores/aluminum ores/Law of the Sea; resources/United States Exclusive Economic Zone/sea water/sands; gravel deposits/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Geologic framework, petroleum potential, and environmental geology of the United States Beaufort and northeasternmost Chukchi seas. Geology and exploration of the National Petroleum Reserve in Alaska, 1974 to 1982.

Grantz, A.; S. D. May; D. A. Dinter; et. al. U. S. Geol. Surv., USA
Geological Survey Professional Paper, 1399, 231-255, 1988.

Descriptors: *Alaska/*Arctic Ocean/economic geology/oceanography/environmental geology/geophysical surveys/petroleum/continental shelf/geologic hazards/seismic surveys/USG; Western U.S./United States/northern Alaska/North Slope/National Petroleum Reserve Alaska/Chukchi Sea/Beaufort Sea/offshore/29 (ECONOMIC GEOLOGY/ENERGY SOURCES)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/22 (ENGINEERING & ENVIRONMENTAL GEOLOGY)

Regional geology and petroleum potential of the United States Beaufort and northeasternmost Chukchi seas. Geology and resource potential of the continental margin of western North America and adjacent ocean basins, Beaufort Sea to Baja California.
Grantz, A.; S. D. May; D. A. Dinter; et. al. U. S. Geol. Surv., Menlo Park, CA, USA
Circum-Pacific Council for Energy and Mineral Resources, Earth Science Series 6, 17-35, 1987.

Descriptors: *Arctic Ocean/*Alaska/economic geology/oceanography/geophysical surveys/petroleum/continental shelf/seismic surveys/Beaufort Sea/Chukchi Sea/passive margins/Neocomian/Lower Cretaceous/Cretaceous/Prudhoe Bay/Western U.S./United States/sandstone/clastic rocks/shale; conglomerate/limestone/carbonate rocks/reflection/Dinkum Grabe; common-depth-point method/Kaktovik Basin/Nuwuk Basin/Canada Basi; thermal maturity/faults/folds/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/29 (ECONOMIC GEOLOGY/ENERGY SOURCES)

Seamount benthic ecology and potential environmental impact from manganese crust mining in Hawaii Seamounts, islands, and atolls.

Grigg, R. W.; A. Malahoff; E. H. Chave, et al. Univ. Hawaii, Hawaii Inst. Mar. Biol., Honolulu, HI, USA; Northwest. Univ., USA; NOAA, USA; Natl. Mar. Fish. Serv., USA; Univ. Hawaii, Hawaii Inst. Geophys., Honolulu, HI, USA
Geophysical Monograph 43,379-390, 1987.

Descriptors: *Hawaii/*ecology/*Pacific Ocean/environmental geology/oceanography/economic geology/invertebrates|es/impact statements/ocean floors/manganese ores/deep-sea environmen; East Pacific Ocean Islands/Polynesia/United States/north-central Pacific/seamounts/benthonic taxa/metal ores/chemically precipitated rocks/United States Exclusive Economic Zone/Cross Seamount/faunal list/22 (ENGINEERING & ENVIRONMENTAL GEOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Nature and distribution of potential heavy-mineral resources offshore of the Atlantic Coast of the United States.
Grosz, A. E. U.S. Geol. Surv., Reston, VA 22092, USA
MAR. MIN, vol. 6, no. 4, pp. 339-357, (1987).

Abstract: The United States is dependent on foreign imports of placer heavy minerals for a majority of its ilmenite and rutile, and virtually all of its monazite requirements. Although sand deposits in the southeastern United States are important domestic sources of these heavy minerals (HM) and a number of other less well-known heavy-mineral species, global onshore reserves of placer minerals may fall short of demand in as few as 20 years. The results of the studies of the third dimension, based on vibracore samples, show vertical continuity of elevated HM values found in some surface grab samples in areas offshore of the Atlantic seaboard. The HM assemblage from the Atlantic Continental Shelf, however, contains a progressively higher proportion of potentially valuable HM to the south, where it is more deeply weathered and, in theory, holds better prospects for commercial deposits of titanium minerals than deposits further to the north, which may contain higher absolute values of HM.

Preliminary grain-size and mineralogic analyses of vibracore samples from the inner continental shelf offshore of Cape Canaveral, Florida.
Grosz, A. E.; B. W. Nocita; P. Kohpina, et al. Univ. South Fla., USA; U. S. Geol. Surv., Reston, VA, USA
Open-File Report (United States Geological Survey. 1978) OF-89-0018, 22, 1989.

Descriptors: *Florida/*Atlantic Ocean/*sediments/oceanography/economic geology/marine sediments/continental shelf/heavy mineral deposits/gravel deposits/heavy minerals/Brevard County Florida/USGS/Southeastern U.S./Eastern U.S./United States/east-central Florida/Atlantic Coastal Plain; North America/Cape Canaveral Florida/inner shelf/grain size; mineral composition/cores/Exclusive Economic Zone/sands/shoals; shorelines/reclamation/North American Atlantic/North Atlantic; textures/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/28 (ECONOMIC GEOLOGY, NONMETALS)/22 (ENGINEERING & ENVIRONMENTAL GEOLOGY)

Mining sand in the EEZ.
Grover, D.; H. Napa, CA, USA
SEA TECHNOL, vol. 26, no. 2, pp. 40-42, 1985.

Abstract: The most valuable non-fuel mineral to be harvested from the sea may turn out not be to cobalt, manganese, or metallic sulfides, but ordinary beach sand. This prediction was made recently at the Oceans "84 Conference in Washington, D.C., in the fall of 1984. The occasion was a symposium outlining studies that have been made of the resource potential of the Exclusive Economic Zone or EEZ. Other studies in recent years have generally confirmed the need to look offshore for new sources of sand and gravel. In fact, limited mining of ocean sand is already underway on the east coast. The balance of this report will be devoted to examining largescale mining of the continental shelf, and the technology of such mining.

Characterization of Co-rich ferromanganese crust fields within the Johnston Island EEZ (central Pacific). The ocean; an international workplace; proceedings.
Halbach, P.; C. D. Sattler; F. Teichmann, et al. Inst. Mineral. und Mineral Rohst., Clausthal-Zellerfeld, DEU; Dep. Natl. Def., CAN Dep. Fish. and Oceans, Ottawa, ON, CAN
Oceans '87 (New York) 1-5, pp.1015-1020, 1987.

Descriptors: *East Pacific Ocean Islands/*nodules/*Pacific Ocean/oceanography/ferromanganese composition/economic geology/genesis/cobalt ores/Johnston Island/central Pacific Ocean/metal ores/chemical composition/mineral composition/United States Exclusive Economic Zone/27 (ECONOMIC GEOLOGY/METALS)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Contractor Report on Mineral Processing.
Harvey, W. W. Arlington Technical Services, MA, 172p, Jul 87.

Abstract: Offshore titanium heavy metal placers: processing and related considerations; Offshore phosphorite deposits: processing and related considerations; Processing considerations for offshore chromite heavy metal placers; Polymetallic sulfides and oxides of the U.S. EEZ: metallurgical extraction and related aspects of possible future development.

Cobalt-rich ferromanganese crusts from Central Pacific. AAPG fourth Circum-Pacific energy and mineral resources conference.
Hein, J. R.;F. T. Manheim;W. C. Schwab,et al. U. S. Geol. Surv., Menlo Park, CA, USA; Woods Hole Oceanogr. Inst., USA
AAPG Bulletin 70: 7,925, 1986.

Descriptors: *Pacific Ocean/*nodules/oceanography/ferromanganese composition/cobalt ores/metal ores/United States Exclusive Economic Zone; Central Pacific/Pacific Basin/Necker Ridge/Hawaii/East Pacific Ocean Islands/Polynesia/United States/Johnston Island/Palmyra Island/Marshall Islands/Micronesia/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Geological and geochemical data for seamounts and associated ferromanganese crusts in and near the Hawaiian, Johnston Island, and Palmyra Island Exclusive Economic Zone.
Hein, J. R.;F. T. Manheim;W. C. Schwab, et al. U. S. Geol. Surv., Menlo Park, CA, USA
Open-File Report (United States Geological Survey. 1978) OF 85-0292, 132, 1985.

Descriptors: *Hawaii/*Pacific Ocean/*Polynesia/*sedimentary rocks/oceanography/chemically precipitated rocks/ocean floors/ferromanganese composition/USGS/United States/Palmyra Island/Johnston Island/Necker Ridge/Horizon Guyot/S. P. Lee Guyo; Colahan Seamount/Abbott Seamount/seamounts/geochemistry/volcanic rocks/metallogeny/metal ores/possibilities/submarine environmen; North Pacific/Line Islands/sampling/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Composition and distribution of cobalt-rich ferromanganese crusts from the Pacific USGS research on mineral resources, 1987; program and abstracts.
Hein, J. R.;L. A. Morgenson;C. Fleishman, et al. U. S. Geol. Surv., USA
Geological Survey Circular 0995,28-30, 1987.

Descriptors:*sedimentation/*cobalt/*sedimentary rocks/*Pacific Ocean/*mineral deposits/*genesis/processes/geochemistry/chemically precipitated rocks/economic geology/cobalt ores/chemical sedimentation/ferromanganese composition/environment/USG; United States Exclusive Economic Zone/chemical composition; precipitation/marine environment/metallogeny/metal ores/mineral deposits/genesis/deep-sea environment/27 (ECONOMIC GEOLOGY/METALS)/07 (MARINE GEOLOGY AND OCEANOGRAPHY); 02 (GEOCHEMISTRY)

Cobalt-rich ferromanganese crusts from the Exclusive Economic Zone of the United States and nodules from the oceanic Pacific. Geology and resource potential of the continental margin of western North America and adjacent ocean basins, Beaufort Sea to Baja California.
Hein, J. R.;L. A. Morgenson;D. A. Clague, et al. U. S. Geol. Surv., Menlo Park, CA, USA.
Circum-Pacific Council for Energy and Mineral Resources, Earth Science Series 6,753-771, 1987.

Descriptors: *Pacific Ocean/*nodules/economic geology/ferromanganese composition/metal ores/geochemistry/United States Exclusive Economic Zone; cobalt ores/nickel ores/platinum ores/Kiribati/Marshall Island; Micronesia/Johnston Island/Oceania/East Pacific Ocean Islands; mineral composition/chemical composition/seamounts/27 (ECONOMIC GEOLOGY/METALS)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Farnella cruise F7-86-HW, cobalt-rich ferromanganese crust data report for Karin Ridge and Johnston Island, Central Pacific.
Hein, J. R.;W. C. Schwab;D. G. Foot, et al. U. S. Bur. Mines, USA; U. S. Geol. Surv., USA
Open-File Report (United States Geological Survey. 1978)OF 87-0663, 37, 1987.

Descriptors: *Pacific Ocean/*East Pacific Ocean Islands/*sedimentary rocks; *cobalt/oceanography/chemically precipitated rocks/geochemistry/surveys/marine geology/ferromanganese composition/USGS/Central Pacific/Karin Ridge/Johnston Island/United States Exclusive Economic Zone/dredged samples/seismic surveys/geophysical surveys; North Pacific/bathymetry/chemical sedimentation/deep-sea environment/metallogeny/02 (GEOCHEMISTRY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/27 (ECONOMIC GEOLOGY/METALS)

Resource assessment of cobalt-rich ferromanganese crusts in Central and Western Pacific. AAPG fourth Circum-Pacific energy and mineral resources conference.
Helsley, C. E.;B. Keating;E. Decarlo, et al. Univ. Hawaii, Hawaii Inst. Geophys., Honolulu, HI, USA.
AAPG Bulletin 70: 7,925, 1986.

Descriptors: *Pacific Ocean/*nodules/oceanography/ferromanganese composition/cobalt ores/Central Pacific/West Pacific/metal ores/resources; evaluation/United States Exclusive Economic Zone/composition; seamounts/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/27 (ECONOMIC GEOLOGY/METALS)

Seismic investigation of the phosphate-bearing, Miocene-age strata of the continental shelf off of Georgia. Geological Society of America, Southeastern Section, 38th annual meeting
Henry, V. J.; J. A. Kellam; L. S. Rueth, et. al. Ga. State Univ., Geol. Dep., Atlanta, GA, USA; Ga. Dep. Nat. Res., USA Fla. Dep. Environ. Regul., USA.
Abstracts with Programs - Geological Society of America 21: 3, Atlanta, GA, Apr. 6-7, 1989.
Descriptors: *Atlantic Ocean/*Georgia/economic geology/oceanography/phosphate deposits/continental shelf/Hawthorn Formation/Northwest Atlantic/Miocene/Neogene/Tertiary/sediments/seismic stratigraph; Southeastern U.S./Eastern U.S./United States/southeastern Georgi; lithostratigraphy/boreholes/mineral exploration/seismic surveys; geophysical surveys/28 (ECONOMIC GEOLOGY/NONMETALS)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Seacliff diving and sediment studies on the Gorda Ridge.
Karlin, R. Univ. Nev., Mackay Sch. Mines, Reno, NV, USA
Open File Report - State of Oregon, Department of Geology and Mineral Industries, O 89-4, 17p., 1989.

Descriptors: *sediments/*Pacific Ocean/marine sediments/economic geology/distribution/mineral resources/Gorda Rise/mineralization/sample; cores/Escanaba Trough/hydrothermal conditions/United States Exclusive Economic Zone/massive deposits/host rocks/27 (ECONOMIC GEOLOGY/METALS)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Conceptual approaches for mining marine polymetallic sulfide deposits.
Kaufman, R. Deepsea Ventures, Inc., Gloucester Point, VA 23062, USA
MAR. TECHNOL. SOC. J, vol. 19, no. 4, pp. 50-56, 1985.

Abstract: The key element of mining polymetallic deposits is the bottom device for excavating and preparing the materials for transport to the surface. Several conceptual approaches for the bottom miner are presented. In addition, a proposed scenario for mining a hypothetical deposit on the Gorda Ridge is outlined. Conclusions are that seabed near-surface deposits are mineable based upon existing deep ocean mining, offshore oil and near shore marine dredging technology. Key technological needs are associated with the development of tools and equipment for deposit sampling and delineation.

Preliminary considerations for the design of cobalt mining systems in the U.S. EEZ. Oceans '85 "Engineering and the Environment" San Diego, CA (USA) 12-14 Nov 1985.
Latimer, J. P.;R. Kaufman. Deepsea Ventures, Inc., Gloucester Point, VA 23062, USA
OCEANS '85, vol. 1, pp. 378-399, 1985.

Abstract: On March 10, 1983, President Ronald Reagan signed a proclamation establishing the U.S. Exclusive Economic Zone (EEZ). Thus far, two principal mineral types have been singled out for special attention: (1) polymetallic sulfides and (2) cobalt enriched manganese crusts. For cobalt crusts, the paper presents preliminary considerations for the design of mining systems.

Marine cobalt resources.
Manheim, F. T. Office of Marine Geol., US Geol. Survey, Woods Hole, MA, USA
Science (USA) vol.232, no.4750, pp. 600-8, 2 May 1986.

Abstract: Ferromanganese oxides in the open oceans are more enriched in cobalt than any other widely distributed sediments or rocks. Concentrations of cobalt exceed 1 percent in ferromanganese crusts on seamounts, ocean ridges, and other raised areas of the ocean. The cobalt-rich crusts may be the slowest growing of any Earth material, accumulating one molecular layer every 1 to 3 months. Attention has been drawn to crusts as potential resources because they contain cobalt, manganese, and platinum, three of the four priority strategic metals for the United States. Moreover, unlike abyssal nodules, whose recovery is complicated by their dominant location in international waters, some of the most cobalt-rich crusts occur within the exclusive economic zone of the United States and other nations. Environmental impact statements for crust exploitation are under current development by the Department of the Interior.

Potential for marine mining of phosphate within the U.S. Exclusive Economic Zone (EEZ).
Marvasti, A.;S. Riggs. Dep. Econ., East Carolina Univ., Greenville, NC 27834, USA
MAR. MIN, vol. 6, no. 3, pp. 291-300, (1987).

Abstract: Even though phosphorus is not recognized as a strategic mineral, its important role in the production of inorganic fertilizer demands that special attention be given to the future of the industry. Survival of the industry in the future, in part, depends upon its successful application of a suitable mining technology, such as hydraulic slurry mining, to either the deep, high-grade, land-based resources, or the offshore deposits within the Exclusive Economic Zone (EEZ). Potentials of the offshore phosphate deposits of southern California, Georgia and North Carolina are compared. Based on the available geological knowledge, this paper identifies the deposits on the North Carolina continental shelf, especially the Frying Pan Area, as the most promising for exploitation in the near future.

Environmental considerations for the development of metalliferous sulfides.
McMurray, G. Gorda Ridge Tech. Task Force Coord., Oregon Dep. Geol. and Miner. Ind., Portland, OR, USA
MAR. TECHNOL. SOC. J, vol. 19, no. 4, pp. 57-61, 1985.

Abstract: The Gorda Ridge represents the only ocean spreading center, and thus, the sole source of active mineralization of this type within the United States Exclusive Economic Zone. A scheduled lease sale for the Gorda Ridge was postponed in 1984, and led to the formation of the joint federal-state Gorda Ridge Technical Task Force. The group is charged with an analysis of the economic, engineering and environmental implications of the proposed lease for metalliferous sulfides. The Task Force has recommended priorities for study, and exploration-oriented studies have begun, but environmental impact analysis will not occur for quite some time in the future.

Geochemical processes and stratigraphic history of Co-rich ferromanganese crust accumulation in the Hawaiian Archipelago. AGU 1985 fall meeting.
McMurtry, G. M.;E. H. de Carlo;K. H. Kim, et al. Hawaii Inst. Geophys., Honolulu, HI, USA
Eos, Transactions, American Geophysical Union 66: 46,1083, 1985.

Descriptors: *Pacific Ocean/oceanography/geochemistry/ocean floors/metals/United States Exclusive Economic Zone/Hawaii; East Pacific Ocean Islands/Polynesia/United States/seamounts; Th-230/chemically precipitated rocks/cobalt/SEM data/manganese; Upper Cretaceous/Cretaceous/mineral composition/hydrothermal conditions/thorium/02 (GEOCHEMISTRY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Outer Continental Shelf Environmental Assessment Program. Final reports of principal investigators. Volume 51.
National Oceanic and Atmospheric Administration.National Ocean Serv., Anchorage, AK (USA), 787 p., 1986.

Abstract: Research to determine the accumulation of organic constituents and heavy metals from petroleum-impacted sediments by marine detritivores of the Alaskan outer continental shelf Suspended particulate matter distribution, transport, and physical characteristics in the north Aleutian Shelf and St. George Basin lease areas The production and dispersion of dissolved methane in southeastern Bering Sea Oil spill vulnerability, coastal morphology, and sedimentation of outer Kenai Peninsula and Montague Island Circulation and water masses in the Gulf of Alaska Coastal oceanography of the northeastern Gulf of Alaska.

Incentives for deep ocean mining. Proceedings; Eighth annual Gulf of Mexico information transfer meeting.
O'Hara, J. G.; Offshore Min. Co., USA
Proceedings - Gulf of Mexico Information Transfer Meeting, pp.375-378, 1987.

Descriptors: *mineral resources/*ocean floors/production/possibilities/marine mining/mineral exploration/United States Exclusive Economic Zone/economic geology/UNCLOS I/UNCLOS III; deep-sea environment/environment/international cooperation/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Outlook for offshore shell dredging Proceedings; Eighth annual Gulf of Mexico information transfer meeting.
Palmore, R. D. Dravo Basic Mater. Co., USA
Proceedings - Gulf of Mexico Information Transfer Meeting, pp.374-375, 1987.

Descriptors: *Gulf Coastal Plain/economic geology/oceanography/mineral resources/continental shelf/Gulf of Mexico/North American Atlantic/North Atlantic/Atlantic Ocean/mineral exploration/sand; gravel/clastic sediments/shells/United States Exclusive Economic Zone/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Development of metalliferous oxides from cobalt-rich manganese crusts.
Paul, R. G. Miner. Manage. Serv., Off. Strategic and Int. Miner., Long Beach, CA, USA
MAR. TECHNOL. SOC. J, vol. 19, no. 4, pp. 45-49, 1985.

Abstract: Cobalt-rich manganese crusts are being viewed as an increasingly important U.S. domestic source of strategic minerals. The crusts are found in a deep ocean environment in various parts of the world, including the U.S. Exclusive Economic Zone. Recent exploration and environment studies in the area of Hawaii will lead to the leasing and potential mining of crust resources using new and innovative mining techniques. The environmental consequences and economic benefits of mining and processing to the local community are important considerations in the leasing process.

The face of the deep; road maps of discovery.
Peck, D. L. U. S. Geol. Surv., Reston, VA, USA
Geological Survey Circular, C-1018, 35-37, 1988.

Descriptors: *ocean floors/mineral resources/mineral exploration/USGS/United States Exclusive Economic Zone; exploration/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Nation's ocean minerals stake lies in regulations.
Pendley, W. P. Comiskey and Hunt, Attorneys at Law, Washington, DC, USA
OCEAN IND, vol. 21, no. 1, pp. 38-39, (1986).

Abstract: On March 10, 1983, President Reagan brought under United States control a new ocean frontier. On that date, the nation joined more than 50 others which had earlier proclaimed an Exclusive Economic Zone (EEZ) and with it obtained sovereign rights to resources of the sea and seabed. With this single action, President Reagan nearly quadrupled U.S. ocean jurisdiction, laying claim to the ocean resources out 200 miles off the coasts of its 50 states and trust territories for the purpose of exploring, developing, conserving and managing minerals and other natural resources of the ocean. Laws and the regulations adopted to implement exploration of vast mineral deposits in the ocean will play a major role in expanding economic opportunities of the sea.

Strategic and critical mineral development in the Exclusive Economic Zone: Solutions and strategies. Oceans '86 "Science-Engineering-Adventure" Washington, DC (USA) 22-25 Sep 1986.
Pendley, W. P. Comiskey and Hunt, 4023 Chainbridge Rd., Fairfax, VA 22030, USA
OCEANS '86, pp. 296-301, 1986.

Abstract: The author addresses the evolving regulatory scheme being developed by the Department of the Interior to permit mining for non energy resources in the Exclusive Economic Zone of the United States under the Outer continental Shelf Lands Act of 1953. He compares and contrasts OCS Lands Act statutory scheme, as implemented with draft regulations, with Deep Seabed Hard Mineral Resources Act and onshore mineral development authorities. He also discusses the alternative of potential enactment of new statutory authority, with delay and dislocations involved in the legislative process. The regulatory scheme is discussed in detail, exploring potential problems and offering solutions.

Regional geology and petroleum potential of the northern Gulf of Alaska continental margin. Geology and resource potential of the continental margin of western North America and adjacent ocean basins, Beaufort Sea to Baja California.
Plafker, G.; D. W.(EDITOR) Scholl; A. E. Grantz, et. al. U. S. Geol. Surv., Menlo Park, CA, USA.
Circum-Pacific Council for Energy and Mineral Resources, Earth Science Series 6, 229-268, 1987.

Descriptors: *Alaska/*Pacific Ocean/oceanography/economic geology/continental margin/petroleum/Orca Group/Western U.S./United State; Gulf of Alaska/North American Pacific/Prince William Terrane; Yakutat Terrane/Eocene/Paleogene/Tertiary/oceanic crust/crus; strike-slip faults/faults/Saint Elias Mountains/Chugach Mountain; reservoir rocks/sandstone/clastic rocks/structural traps/traps; source rocks/geologic maps/maps/mudstone/siltstone/conglomerat; claystone/Pamplona Zone/29 (ECONOMIC GEOLOGY/ENERGY SOURCES)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

FUTURE U. S. PHOSPHATE RESOURCES: A NEW PERSPECTIVE.
Riggs, S. R. East Carolina Univ, Greenville, NC, USA
Publ by Soc of Mining Engineers Inc, Littleton, Co, USA p 153-159, Held in conjunction with the Society of Mining Engineers 1986 Annual Meeting, 1986.

Abstract: Extensive phosphate resources occur within the Miocene Hawthorn and Pungo River Formations which have not been considered in the past since they were poorly known and were not available to conventional mining. These resources include 1) deep phosphates that occur below 75 meters of overburden within major sediment basins throughout the southeastern coastal plain, and 2) offshore phosphates that occur on the continental shelf and within the U. S. Exclusive Economic Zone (EEZ). The future

potential of these two vast resources will be realized with development of new mining technologies such as hydraulic slurry mining and integrated with advanced technology already being utilized in the offshore petroleum industry. (Author abstract) 27 refs.

Seabed mining of cobalt-rich manganese crusts in the Pacific United States exclusive economic zone.
Carnegie-Mellon University, Department of Engineering and Public Policy, Pittsburgh, PA, USA, 209, 1985.

Descriptors: *United States/*Pacific Ocean/economic geology/oceanography/manganese ores/ocean floors/cobalt/exclusive economic zone/27 (ECONOMIC GEOLOGY/METALS)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Heavy-mineral placer potential map of the U.S. continental shelf, western and northern Gulf of Mexico.
Shideler, G. L. U. S. Geol. Surv., USA.
Miscellaneous Field Studies Map (United States Geological Survey) MF-2037, 1 sheet, 1988.
Descriptors: *Louisiana/*Texas/*Gulf of Mexico/*Gulf Coastal Plain/*placers/oceanography/economic geology/heavy mineral deposits/continental shelf/maps/USGS/Southern U.S./United States; Southwestern U.S./North America/North American Atlantic/North Atlantic/Atlantic Ocean/economic geology maps/28 (ECONOMIC GEOLOGY/NONMETALS)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Managing nonenergy marine mineral development -- genesis of a program. Oceans '85 "Engineering and the Environment" San Diego, CA (USA) 12-14 Nov 1985.
Smith, J. B. Minerals Manage. Serv., U.S. Dep. Int., 11 Golden Shore, Long Beach, CA 90802, USA
OCEANS '85, vol. 1, pp. 339-351, 1985.

Abstract: The Office of Strategic and International Minerals of the Minerals Management Service, U.S. Department of the Interior, has been established to develop a leasing program for nonenergy minerals in the Outer Continental Shelf/Exclusive Economic Zone United States. This paper discusses the heavy and growing dependence of the U.S. on mineral imports, describes the major Executive actions that have been taken to support development of the nonenergy minerals leasing program, briefly reviews the status of global marine mining operations, and discusses the goals and status of the OCS/EEZ leasing program.

Marine mineral resources in the Gulf of Mexico; session overview Proceedings; Eighth annual Gulf of Mexico information transfer meeting.
Smith, J. B.;C. J. John. Miner. Manage. Serv., Off. Strategic and Int. Miner., New Orleans, LA, USA; La. Geol. Surv., USA
Proceedings - Gulf of Mexico Information Transfer Meeting, pp.362-364, 1987.

Descriptors: *Gulf of Mexico/economic geology/oceanography/mineral resources/continental shelf/North American Atlantic/North Atlantic/Atlantic Ocean/marine environment/environment/outer shel; United States Exclusive Economic Zone/mineral exploration/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

DEVELOPING A REGULATORY FRAMEWORK FOR LEASING MINERALS ON SUBMERGED FEDERAL LANDS.
Smith, J. B.;T. J. MacGillvray. US Dep of the Interior, Long Beach, CA, USA
Marine Mining, vol. 7, no. 2, pp. 137-148,, 1988.

Abstract: The Solicitor of the United States Department of the Interior (USDOI) has ruled that the Outer Continental Shelf Lands Act (OCSLA) authorizes the Secretary of USDOI to lease oil, gas, sulfur and other minerals located within the Exclusive Economic Zone/Outer Continental Shelf (EEZ/OCS) offshore the coastal states. This paper discusses USDOI's legal authority for leasing EZ/OCS minerals, the need for regulations, and the regulatory framework being developed for marine minerals. It is the conclusion of tnis paper that careful consideration should be given to the advantages associated with developing a regulatory framework under the existing authority of the OCSLA. (Edited author abstract) 9 refs.

Existing and potential resources in offshore waters of the United States. National Conference on the States and an Extended Territorial Sea San Antonio, TX (USA) 9-11 Dec 1985.
Squires, D. F. Mar. Sci. Inst., Univ. Connecticut, Storrs, CT 06268, USA
REP. TEX. A&M UNIV. SEA GRANT PROGRAM, pp. 22-45, 1987.

Abstract: The author's objective is to set the stage for the remainder of the conference: To provide a conceptual framework for understanding the resources of the Exclusive Economic Zone, to provide a working vocabulary of the current buzzwords, and, to the extent possible, identify those resources that are located within an extended territorial sea of the USA.

Workshop 8; Information availability and utilization for hard minerals leasing, exploration, and development of the EEZ.
Stone, R. T.(chairperson);J. B.(chairperson) Smith;D. S.(chairperson) Cottell. U. S. Miner. Manage. Serv., Long Beach, CA, USA; ARC Mar., GBR.
Geological Survey Circular C-1018, 125-131, 1988.

Descriptors: *ocean floors/mineral resources/mineral exploration/USGS/United States Exclusive Economic Zone; exploration/land leases/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Bibliography and index of mineral resources of the U.S. Exclusive Economic Zone west of the Washington State coastline. AGU; 34th annual Pacific Northwest regional meeting.
Taken, V. J. Wash. Div. Geol. and Earth Resour., Consultant, Olympia, WA, USA
Eos, Transactions, American Geophysical Union 68: 52,1815, 1987.

Descriptors: *Pacific Ocean/*Washington/economic geology/oceanography/bibliography/continental margin/North American Pacific/mineral resources/Pacific Coast/Western U.S./United States/United States Exclusive Economic Zone/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Development of an advanced sampling device for the investigation of marine ferromanganese crust deposits.
Toth, J. R.;C. A. Amerigian. Anal. Serv. Co., USA
Proceedings - Offshore Technology Conference 18: 3,127-134, 1986.

Descriptors: *nodules/*cobalt ores/*manganese ores/ferromanganese composition/resources/exploitation/review/design/development/instruments/United States Exclusive Economic Zone/multisample crust coring system/cores; technology/techniques/27 (ECONOMIC GEOLOGY/METALS)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

The outlook for offshore heavy minerals resources. Proceedings; Eighth annual Gulf of Mexico information transfer meeting.
Whitney, M. S. Assoc. Miner. USA
Proceedings - Gulf of Mexico Information Transfer Meeting, pp.380-383, 1987.

Descriptors: *Gulf Coastal Plain/economic geology/oceanography/heavy mineral deposits/continental shelf/Gulf of Mexico/North American Atlantic/North Atlantic/Atlantic Ocean/United States Exclusive Economic Zone/placers/marine environment/environment; dredging/production/mineral exploration/28 (ECONOMIC GEOLOGY/NONMETALS)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Sand and gravel deposits within the United States Exclusive Economic Zone: Resource assessment and uses. 18. Annual Offshore Technology Conference Houston, TX (USA) 5-8 May 1986.
Williams, S. J.
PROC. OFFSHORE TECHNOL. CONF, pp. 377-386, 1986.

Abstract: The USGS in conjunction with various federal and state agencies and academic groups conducts geologic and geophysical studies in the Exclusive Economic Zone (EEZ). Results demonstrate that extremely large deposits are located close to highly urbanized and expanding metropolitan areas as well as near some coastal areas where beach nourishment is proposed to mitigate erosion. Some of these offshore deposits are likely to be mined in the near future when more traditional inland deposits are depleted or no longer available because of land-use and environmental limitations. The latest resources estimates compared with annual sand and gravel consumption in the United States suggest that national needs can be met for the next few centuries and beyond.

III. SURVEYS

National Oceanic and Atmospheric Administration mapping surveys. AAPG annual convention with divisions; SEPM/EMD/DPA.
Andreasen, C. Natl. Ocean. and Atmos. Admin., Rockville, MD, USA
AAPG Bulletin 70: 5,560, 1986.

Descriptors: *Pacific Coast/oceanography/continental margin/maps/bathymetry/continental shelf/continental slope/Seabeam/National Oceanic and Atmospheric Administration; United States Exclusive Economic Zone/Gloria/U. S. Geological Survey/military geology/philosophy/Washington/Oregon/Californi/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Substrate morphology and texture off the mouth of the Connecticut River, northeast margin of Long Island Sound. Geological Society of America, Northeastern Section, 24th annual meeting; abstracts with programs 1989.
Asebrook, J. Wesleyan Univ., Earth and Environ. Sci., Middletown, CT, USA.
Abstracts with Programs - Geological Society of America 21: 2, New Brunswick, NJ, United States, Mar. 23-25, 1989.

Descriptors: *Atlantic Ocean/*Connecticut/oceanography/geophysical surveys/ocean floors/acoustical surveys/Long Island Sound/Connecticut Rive; bathymetry/substrates/sonar methods/shoals/bedforms/continental shelf/sand/clastic sediments/continental slope/intertidal environment/environment/New England/Eastern U.S./United States; southern Connecticut/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Atlas of the Exclusive Economic Zone, western conterminous United States.
EEZ Scan 84 Scientific Staff, USA.
Reston, VA: U. S. Dept. of Interior, U.S. Geological Survey, 152 p., 1986.

Atlas of the U.S. Exclusive Economic Zone, Gulf of Mexico and eastern Caribbean areas.
EEZ Scan 85 Scientific Staff, USA.
Miscellaneous Investigations Series - U.S. Geological Survey,162 over-size p, 1987.

Descriptors: *Gulf of Mexico/*Caribbean Sea/oceanography/geophysical surveys/ocean floors/maps/acoustical surveys/USGS/North American Atlanti; North Atlantic/Atlantic Ocean/eastern Caribbean Sea/United States Exclusive Economic Zone/atlas/side-scanning methods/sonar methods; seismic surveys/seismic profiles/high-resolution methods; bathymetry/magnetic anomalies/mosaics/bottom features/geophysical survey maps/mass movements/plate tectonics/subduction/island arc; imagery/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/18 (GEOPHYSICS/SOLID EARTH)

EDGE; an initiative to study submerged continental lithosphere around the U.S
Austin, J. A., Jr.; M. Talwani. Univ. Tex. Inst. Geophys., Austin, TX, USA; Rice Univ., USA.
Eos, Transactions, American Geophysical Union 70: 12, pp.177, 190-191, 1989.

Descriptors: *United States/*Pacific Ocean/*Atlantic Ocean/*California/oceanography/tectonophysics/continental margin/crust/continental shelf/EDGE/continental crus; North American Pacific/North American Atlantic/North Atlantic; objectives/seismic surveys/geophysical surveys/Pacific Coast; Western U.S./reflection methods/programs/offshore/18 (GEOPHYSICS/SOLID EARTH)/07 (MARINE GEOLOGY AND OCEANOGRAPHY); 20 (GEOPHYSICS/APPLIED)

Structure and stratigraphy of the western Florida shelf; Part I, Multichannel reflection seismic data.
Ball, M. M.;R. G. Martin;R. Q. Foote, et al. Elf Aquitaine, USA; U. S. Geol. Surv., Woods Hole, MA, USA
Open-File Report (United States Geological Survey. 1978) OF 88-0439, 60, 1988.

Descriptors: *Gulf of Mexico/*Florida/*Gulf Coastal Plain/geophysical surveys/oceanography/stratigraphy/seismic surveys/continental shelf/Cenozoic/Mesozoic/USGS/North American Atlantic/North Atlantic/Atlantic Ocean/Southeastern U.S.; Eastern U.S./United States/reflection methods/multichannel method; marine methods/North America/United States Exclusive Economic Zone;

seismic stratigraphy/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/12 (STRATIGRAPHY/HISTORICAL GEOLOGY)/16 (STRUCTURAL GEOLOGY)

Multichannel seismic-reflection profiles collected in 1982 aboard R/V Gyre Cruise G8212, on the western Florida shelf.
Ball, M. M.; N. K. Soderberg; D. R. Nichols, et. al. U. S. Geol. Surv., Woods Hole, MA, USA.
Open-File Report (United States Geological Survey. 1978) OF 87-0372, 4, 1987.

Descriptors: *Florida/*Gulf of Mexico/oceanography/geophysical surveys/continental shelf/seismic surveys/USGS/Southeastern U.S./Eastern U.S./United States/North American Atlantic/North Atlantic/Atlantic Ocean/reflection methods/multichannel methods/seismic profiles/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Multichannel seismic-reflection profiles collected in 1979 aboard M/V Seismic Explorer on the western Florida shelf.
Ball, M. M.; N. K. Soderberg. U. S. Geol. Surv., Denver, CO, USA.
Open-File Report (United States Geological Survey. 1978) OF 89-0157, 3, 1989.

Descriptors: *Florida/*Gulf of Mexico/oceanography/geophysical surveys/continental shelf/seismic surveys/USGS/Southeastern U.S./Eastern U.S./United States/North American Atlantic/North Atlantic/Atlantic Ocean/Gulf Coastal Plain/North America/seismic profiles; multichannel methods/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Ice erosion of a sea-floor knickpoint at the inner edge of the stamukhi zone, Beaufort Sea, Alaska.
Barnes, P. W.; J. L. Asbury; D. M. Rearic, et. al. U. S. Geol. Surv., Menlo Park, Ca, USA.
Marine Geology 76: 3-4, 207-222, 1987.

Descriptors:*Alaska/*oceanography/*ArcticOcean/*sedimentation/geophysicalsurveys/transport/seaice/continentalshelf/acoustical surveys/ice rafting/erosion/Western U.S./United States/northern Alaska/Beaufort Sea/stamukhi zone/ice gouging/knickpoints/side-scanning methods/sonar methods/bathymetr; bottom features/marine sediments/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Shipboard acoustic Doppler profiler velocity observations near Point Conception: spring 1983.
Barth, J. A.;K. H. Brink. Woods Hole Oceanogr. Inst., MA, USA
J. Geophys. Res. (USA) vol.92, no.C4 3925-43, 15 April 1987.

Abstract: During April 1983, shipboard Doppler acoustic log current profiles were collected in an effort to characterize the flow field near points Conception and Arguello, California. Subsurface velocity maps derived from these profiles have been used to describe spatial flow structures both on and off the shelf and to investigate flow variability as a function of time and of wind stress. Persistent westward flow out of the northern half of the Santa Barbara Channel and eastward flow into its southern half were observed regardless of the direction of the local wind stress. During one well-documented upwelling-favorable wind event, currents responded in the form of an energetic offshore squirt of cold water. Observations during downwelling conditions are also described. Evidence for wind forcing of current fluctuations nearshore between the points and north of Point Arguello was found.

The geologic framework of the continental shelf and slope of Virginia with emphasis on petroleum geology. Appalachian Basin symposium; program and extended abstracts. Reston, VA, United States, Nov. 9, 1988.
Bayer, K. C.; R. C. Milici; A. P.(COMPILER) Schultz. U. S. Geol. Surv., Reston, VA, USA; Va. Div. Miner. Resour., USA.
Open-File Report (United States Geological Survey. 1978) OF 88-0585, 36-37, 1988.

Descriptors: *Atlantic Ocean/*Virginia/economic geology/geophysical surveys/oceanography/petroleum/seismic surveys/continental margin/USGS/Appalachian Basin/sedimentary basins/Appalachians/North America/Southeastern U.S./Eastern U.S./United States/continental shelf/continental slope/North American Atlantic/North Atlantic/seismic profiles/29 (ECONOMIC GEOLOGY/ENERGY SOURCES)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

An improved method for the determination of water depth from surface wave refraction patterns.
Bennett, J. R.;T. D. <Editor> Guyenne;J. J. Hunt. Radar Sci. Lab., Environ. Res. Inst. of Michigan, Ann Arbor, MI, USA. Sponsor: IEEE; ESA; NASA; NOAA; CNES; et al.
IGARSS '86. Remote Sensing: Today's Solutions for Tomorrow's Information Needs (ESA SP-254) (IEEE Cat. No.86CH2268-1) 813-17 vol.2,3 vol. xxiii+1695, Aug. 1986.

Abstract: A mathematical model for using wave refraction observations to determine water depth from a synthetic aperture radar is presented. The model assumes that the waves are long-crested and obey linear theory, that the currents are negligible, and that there is a single dominant frequency. In principle, under these assumptions, the wavenumber magnitude alone is sufficient to determine the depth using the dispersion relation. However, observations of wavelength and direction will not necessarily obey the basic assumptions which lead to this relation. Therefore, before determining the depth from the dispersion relation, the model filters the data so that it is consistent with the theory. The method is tested against Seasat data from the Diamond Shoals region of Cape Hatteras.

Sand depositional models, Texas continental shelf Shelf sedimentation, shelf sequences and related hydrocarbon accumulation.
Berryhill, H. L., Jr; C. L.(chairperson) McNulty; S. J. Conger(chairperson) Morris. 231 Rosebud Street, Corpus Christi, TX, USA; Morris Geol. Enterp., USA; Univ. Tex., Arlinton, TX, USA.
Annual Research Conference. Gulf Coast Section. Society of Economic Paleontologists and Mineralogists. Corpus Christi, TX, United States, Dec. 7-10, 1986. Program and Abstracts 7, 5, 1986.

Descriptors: *Texas/oceanography/continental shelf/Southwestern U.S./United States/Gulf Coastal Plain/North America/upper Quaternary/Quaternary/sediments/clastic sediments/changes of level/lithofacies/Wisconsinan/upper Pleistocene/Pleistocene/fluvial environment/environment/shelf environment/deltaic environment/reefs/seismic profiles/seismic surveys/geophysical surveys/geophysical profiles/Colorado River; Brazos River/Rio Grande/reflection/alluvium/continental slope; growth faults/faults/anticlines/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

A comparison of frequency dependent seismic propagation through sedimentary and igneous seafloor. AGU 1986 fall meeting and ASLO winter meeting. San Francisco, CA, United States, Dec. 8-12, 1986.

Bibee, L. D.; J. A. Ballard; J. F. Gettrust, et. al. Nav. Ocean Res. and Dev. Act., NSTL, MS, USA; Scripps Inst. Oceanogr., USA; U. S. Geol. Surv., USA.
Eos, Transactions, American Geophysical Union 67: 44, 1094, 1986.

Descriptors: *Eastern U.S./*seismology/*Pacific Ocean/elastic waves/oceanography/geophysical surveys/continental margin/propagation/seismic surveys/United States; refraction/geophysical profiles/ocean bottom seismographs/body waves/attenuation/Q/compression/frequency/Juan de Fuca Ridge; basalts/volcanic rocks/19 (GEOPHYSICS/SEISMOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Atlantic United States outer continental shelf basins; maps & descriptions
Bielak, L.; G. Carpenter; G. E. Dellagiarino. U.S.G.S. MMS-86-0048, 5-9, 1986.

Descriptors: *Atlantic Ocean/*United States/oceanography/maps/continental shelf/bathymetric maps/Baltimore Canyon/Blake Plateau/Straits of Florida/explanatory text/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Map and tabulation of Quaternary mass movements along the United States-Canadian Atlantic continental slope from 32 degrees 00' to 47 degrees 00'N latitude.
Booth, J. S.; D. W. O'Leary; P. Popenoe, et. al. U. S. Geol. Surv., USA.
Miscellaneous Field Studies Map (United States Geological Survey) MF-2027, 3 sheets, 1988.

Descriptors: *Canada/*Eastern U.S./*Atlantic Ocean/oceanography/engineering geology/continental slope/geologic hazards/maps/slope stability/USGS; Newfoundland/Eastern Canada/Nova Scotia/Maritime Provinces/United States/North American Atlantic/North Atlantic/Quaternary/mass movements/neotectonics/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/22 (ENGINEERING & ENVIRONMENTAL GEOLOGY)/24 (SURFICIAL GEOLOGY,QUATERNARY GEOLOGY)

Mississippi Fan; DSDP Leg 96 drilling results. Houston, United States, May 6-9, 1985.
Bouma, A. H.; J. M. Coleman; A. A. Wright-Meyer, et. al. Gulf Res. and Dev. Co., USA; La. State Univ., USA; Tex. A&M Univ., USA.
Proceedings - Offshore Technology Conference 17, Vol. 2, 105-112, 1985.

Descriptors: *Louisiana/oceanography/stratigraphy/geophysical surveys/continental shelf/Pleistocene/seismic surveys/Mississippi Delta; Deep Sea Drilling Project/Leg 96/United States/Gulf Coastal Plai; North America/Quaternary/Cenozoic/ocean floors/cores/offshor/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Geologic evidence for rate of plate convergence during the Taconic arc-continent collision.
Bradley, D. C.;T. M. Kusky. Dept. of Earth & Planetary Sci., Johns Hopkins Univ., Baltimore, MD, USA
J. Geol. (USA) vol.94, no.5, pp. 667-81, Sept. 1986.

Abstract: The rate of plate convergence during arc-continent collision can be estimated from the rate at which the secondary effects of subduction move across the underriding plate in advance of the plate boundary. The following sequence of events is typical: shoaling and/or emergence of the continental shelf; rapid subsidence, by a combination of normal faulting and trenchward tilting; and a change from platformal to flysch sedimentation. Such a sequence has been recognized in the Taconic foreland basin in eastern New York and interpreted as the result of collision between the ancient passive margin of North America and an island arc terrane at an east-dipping subduction zone during Medial Ordovician times. A plot of age versus distance across strike shows that the diachronous migration of these phenomena across the foreland proceeded at rates of 2 to 3 cm/yr; this is regarded as the plate convergence rate during the latter part of the Taconic Orogeny.

Seismic modelling at Deep Sea Drilling Project Site 603; the Lower Continental Rise Hills.
Brew, D. S. Dalhousie Univ., Halifax, NS, CAN. Master's thesis, 219p., 1986.

Descriptors: *Atlantic Ocean/*North Carolina/oceanography/geophysical surveys/continental slope/seismic surveys/Deep Sea Drilling Project/DSDP Site 603/North Atlantic/synthetic seismograms/models/migration; rates/regression analysis/statistical analysis/Southeastern U.S.; Eastern U.S./United States/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Complexity of Pliocene/Pleistocene marine deposits, NW Alaska; implications for offshore mapping and permafrost modelling. The Geological Society of America, 99th annual meeting. San Antonio, TX, United States, Nov. 10-13, 1986.
Brigham-Grette, J. Univ. Alberta, Dep. Geol., Edmonton, AB, CAN.
Abstracts with Programs - Geological Society of America 18, 550, 1986.

Descriptors: *Alaska/*sedimentation/*mollusks/stratigraphy/environment/biostratigraphy/oceanography/Pleistocene/marine environment/continental shelf/Pliocene/Gubik Formation/Neogene/Tertiary/Quaternary/northwestern Alaska/Western U.S./United States/maps/permafrost/North Slope/transgression; regression/Chukchi Sea/24 (SURFICIAL GEOLOGY,QUATERNARY GEOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Hydrates, oil seepage, and chemosynthetic ecosystems on the Gulf of Mexico slope; an update.
Brooks, J. M.; M. C., II Kennicutt; R. R. Bidigare, et. al. Tex. A&M Univ., Dep. Oceanogr., College Station, TX, USA; Univ. Calif., USA; LGL Ecol. Res. Assoc., USA.
Eos, Transactions, American Geophysical Union 68: 18, 498-499, 1987.

Descriptors: *Gulf of Mexico/*Louisiana/*organic materials/environmental geology/oceanography/hydrocarbons/ecology/continental slope/gas hydrates/North American Atlantic; North Atlantic/Atlantic Ocean/Southern U.S./United States/Gulf Coastal Plain/North America/ecosystems/oil seeps/chemosynthesis; marine environment/communities/seismic surveys/geophysical survey; inner slope/fuel resources/worms/mollusks/upper Holocene; Holocene/Quaternary/modern/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/22 (ENGINEERING & ENVIRONMENTAL GEOLOGY)/29 (ECONOMIC GEOLOGY/ENERGY SOURCES)/02 (GEOCHEMISTRY)

Fault slicing-a new approach to the interpretation of fault detail.
Brown, A. R.;G. S. Edwards;R. E. Howard. Geophys. Service Inc., Dallas, TX, USA.
Geophysics (USA) vol.52, no.10, pp.1319-27, Oct. 1987.

Abstract: The manner in which a fault intersects a hydrocarbon reservoir affects production characteristics and thus must be understood in great detail. A 3-D seismic data volume can be sliced interactively to yield seismic sections parallel to a fault plane. These fault slices can then be used in several ways for the study of faults. Tracking of correlative horizons on fault slices provides a map of fault throw and permits study of the throw as a function of vertical traveltime and horizontal position. Because a fault slice remains within one major fault block, the study of growth relationships in that block is facilitated. Splinter faults, which are also significant in development and production, can be studied effectively on fault slices because of the uniform proximity of these sections to the parent fault. It is concluded that there is some uniformity in azimuth between splinter faults and their parent.

Study of physical processes on the US mid-Atlantic continental slope and rise. Volume 3: Appendix. Final Report, Sep. 1983 - May 1987.
BROWN, O.;R. EVANS;R. WATTS, et al. Science Applications International Corp., Newport, R.I, 146P, 1987.

Abstract: Described are three years of physical oceanographic research by Science Applications International Corporation (SAIC) and its subcontractors in the Mid-Atlantic Slope and Rise (MASAR) program. MASAR began in October 1983 and was deigned to provide the Department of Interior's Minerals Management Service (MMS) with sufficient information to allow assessment of the potential impacts of petroleum exploration and production activities on the outer continental shelf (OCS) of the Mid-Atlantic region. Several major tasks were undertaken: determining the general seasonal circulation features; quantifying and describing processes which produce variability; and determining the degree to which the slope/rise circulation features influence the physical oceanography of the adjacent Mid-Atlantic continental shelf. (GRA).

Physiography of the Western United States Exclusive Economic Zone.
Cacchione, D. A.; D. E. Drake; B. D. Edwards, et. al. U. S. Geol. Surv., Menlo Park, CA, USA; U. S. Geological Survey, EEZ-Scan 84 Scientific Staff, USA; Inst. Oceanogr. Sci., GBR.
Geology (Boulder) 16: 2, 131-134, 1988.

Descriptors: *Pacific Ocean/*Pacific Coast/geophysical surveys/oceanography/acoustical surveys/ocean floors/continental slope/maps/United States Exclusive Economic Zone/North American Pacific/sonar methods; GLORIA/bottom features/transform faults/faults/mid-ocean ridge; seamounts/submarine canyons/plate tectonics/Western U.S./United States/plate convergence/Mendocino fracture zone/physiographic map/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Crescentic dunes on the inner continental shelf off northern California.
Cacchione, D. A.;M. E. Field;D. E. Drake, et al. US Geol. Survey, Menlo Park, CA, USA.
Geology (USA) vol.15, no.12, pp.1134-7, Dec. 1987.

Abstract: Large crescentic dunes that resemble barchans have been discovered within elongate scour depressions on the northern California inner continental shelf by using side-scan sonar. These dunes appear to be migrating obliquely to the regional shelf gradient; a preferred offshore direction of transport is indicated by the extended southern wings of many dunes. The isolated dunes and the scour depressions that contain them are located seaward of sea-floor outcrops off rocky capes and sea stacks. Repeated side-scan sonar records spanning four years (1981-1985) indicate that the overall alteration to the bottom morphology during this period was only moderate. The apparent low height of the dunes is consistent with a low migration speed. Over longer time periods (decades), the seaward transport of fine to medium sand in the crescentic dunes is probably an important way by which sand escapes the shallow part of the continental shelf and mixes with the muddy deposits of the central shelf.

GLORIA sonographic mosaics of the Bering Sea and the western Aleutian Arc and adjacent North Pacific. In: USGS research on energy resources, 1988; program and abstracts. Denver, CO, United States, Feb. 29-Mar. 2, 1988.
Carlson, P. R.; A. K. Cooper; J. V. Gardner, et. al. U. S. Geol. Surv., USA; U. S. Geological Survey, EEZ-Scan Bering Sea Group, USAU. S. Geological Survey, Aleutian Arc Group, USA; Inst. Oceanogr. Sci., GBR; U. S. Geol. Surv., USA.
Geological Survey Circular, C-1025, 14-15, 1988.

Descriptors: *Pacific Ocean/*Bering Sea/*Alaska/geophysical surveys/oceanography/acoustical surveys/continental margin/USGS/North American Pacific; Aleutian Islands/Western U.S./United States/West Pacific/GLORI; EEZ/sonar methods/mosaics/sonographs/plate tectonics/ocean floors/submarine canyons/island arcs/bottom features/trenches/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)/18 (GEOPHYSICS/SOLID EARTH)

Long-range side scan sonar and geophysical survey of the Aleutian Basin.
Carlson, P. R.;A. K. Cooper;J. V. Gardner, et al. U. S. Geol. Surv., Menlo Park, CA, USA; U. S., Bering Sea EEZ-Scan Group, USA; Inst. Oceanogr., GBR
Eos, Transactions, American Geophysical Union 68: 9,122-123, 1987.

Descriptors: *Bering Sea/*Alaska/oceanography/geophysical surveys/ocean floors/acoustical surveys/continental slope/United States Exclusive Economic Zone/West Pacific/Pacific Ocean/Aleutian Basin; Western U.S./United States/submarine canyons/seismic surveys; gravity surveys/bathymetry/GLORIA/sonar methods/side-scanning methods/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Late Cenozoic offsets on the offshore connection between the Fairweather and Queen Charlotte faults off Southeast Alaska.
Carlson, P. R.; T. R. Bruns; G. Plafker. U. S. Geol. Surv., Menlo Park, CA, USA.
Marine Geology 85: 1, 89-97, 1988.

Descriptors: *Alaska/*Pacific Ocean/*faults/oceanography/geophysical surveys/tectonophysics/displacements/continental margin/seismic surveys/plate tectonics/transform fault; Western U.S./United States/southeastern Alaska/Fairweather Fault; Queen Charlotte Fault/upper Cenozoic/Cenozoic/North American Pacific/plate boundaries/fault scarps/bottom features/bathymetr; active faults/strike-slip faults/Pacific Plate/North American Plate/18 (GEOPHYSICS/SOLID EARTH)/07 (MARINE GEOLOGY AND OCEANOGRAPHY); 16 (STRUCTURAL GEOLOGY)

Seismic reflection characteristics of glacial and glacimarine sediment in the Gulf of Alaska and adjacent fjords. Modern glacimarine environments; glacial and marine controls of modern lithofacies and biofacies. Ottawa, ON, Canada, Aug. 1, 1987.

Carlson, P. R.; R. D.(EDITOR) Powell; A. E. Elverhoi. U. S. Geol. Surv., Menlo Park, CA, USA; Norw. Polar Res. Inst., NOR; North. Ill. Univ., Dep. Geol., De Kalb, IL, USA.
Marine Geology 85: 2-4, pp. 391-416, 1989.

Descriptors: *Alaska/*Pacific Ocean/*sedimentation/*sediments/oceanography/geophysical surveys/processes/marine sediments/continental shelf/seismic surveys/glaciomarine sedimentation; environmental analysis/Western U.S./United States/Gulf of Alaska; North American Pacific/southeastern Alaska/southern Alaska/fjord; reflection methods/diamicton/clastic sediments/till/outwash/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Free-air gravity anomaly map of the Umnak Plateau region, southeastern Bering Sea.
Childs, J. R.; H. W. Magistrale; A. K. Cooper. U. S. Geol. Surv., USA.
Geophysical Investigations Map (United States Geological Survey) GP-0970, 1 sheet, 1987.

Descriptors: *Alaska/*Bering Sea/oceanography/geophysical surveys/continental margin/ocean floors/gravity surveys/USGS/Western U.S; United States/gravity anomalies/gravity survey maps/maps/West Pacific/Pacific Ocean/plateaus/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Seismic stratigraphy and late Quaternary shelf history, south-central Monterey Bay, California.
Chin, J. L.; H. E. Clifton; H. T. Mullins. U. S. Geol. Surv., Menlo Park, CA, USA; Syracuse Univ., USA.
Marine Geology 81: 1-4, pp. 137-157, 1988.

Descriptors: *California/*Pacific Ocean/oceanography/stratigraphy/geophysical surveys/continental shelf/Quaternary/changes of level/seismic surveys; Monterey County/Pacific Coast/Western U.S./United States/Central California/Monterey Bay/upper Quaternary/seismic stratigraphy; seismic profiles/high-resolution methods/angular unconformities; North American Pacific/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/24 (SURFICIAL GEOLOGY,QUATERNARY GEOLOGY)/20 (GEOPHYSICS/APPLIED)

Reconnaissance high-resolution geophysical survey of the Monterey Bay, California, inner shelf; implications for sand resources.
Chin, J. L.; S. C. Wolf. U. S. Geol. Surv., Menlo Park, CA, USA.
Open-File Report (United States Geological Survey. 1978) OF-88-0410, 34, 1988.

Descriptors: *California/*Pacific Ocean/economic geology/oceanography/geophysical surveys/engineering geology/sands/continental shelf/seismic surveys/shorelines/Santa Cruz County/Monterey County/USGS/Pacific Coast/Western U.S./United States/Central California/Monterey Bay/inner shelf/North American Pacific/high-resolution methods/sand/clastic sediments/beaches; erosion/stabilization/22 (ENGINEERING & ENVIRONMENTAL GEOLOGY)/20 (GEOPHYSICS/APPLIED); 07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Map showing distribution of surficial sediments on the inner continental shelf off central Louisiana.
Circe, R. C.; R. R., Jr. Wertz; D. G. Harrison, et. al. U. S. Army Corps Eng., USAU. S. Geol. Surv., Reston, VA, USA.
Open-File Report (United States Geological Survey. 1978) OF-88-0411, 1 sheet, 1988.

Descriptors:*Louisiana/*GulfofMexico/*sediments/oceanography/marinesediments/continentalshelf/maps/distribution/USGS/Southern U.S./United States/offshore/inner shelf/textures/marine geology maps/Gulf Coastal Plain/North America/North American Atlantic/North Atlanti; Atlantic Ocean/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Telling us what's down there.
Clark, M. K. c/o Compass Publications, Inc., Suite 1000, 1117 N. 19th St., Arlington, VA 22209, USA
SEA TECHNOL, vol. 28, no. 7, pp. 36-39, (1987).

Abstract: "Mosaics" of the U.S. EEZ produced by the GLORIA sonar are revealing much about geological processes and interrelationships. A three-month effort to map the East Coast portion - Maine to Florida - of the U.S. Exclusive Economic Zone brought the research vessel Farnella in for a call at port before she continued on her quest to complete the mapping of the EEZ's 3.4 million square nautical miles. Begun in February of this year, this fourth leg of the U.S. Geological Survey's systematic sonar-mapping surveys of the EEZ produced sonographs - similar in appearance to radar images - of 125,000 square miles of the Atlantic deepwater seafloor. The featured instrument in this survey, as in the previous three, is the GLORIA (Geological Long Range Inclined Asdic) side scan sonar system. The system utilizes a two-ton, 26-foot instrument package or "fish." The fish is normally towed about 1000 feet behind the ship at a depth of 164 feet and speed of eight knots. The GLORIA system can also cover a swath of approximately 37 miles.

Workshop 4; Scientific mapping and research to characterize the EEZ; Gulf Coast.
Coleman, J. M.(chairperson);C. J.(chairperson) John. La. State Univ., Baton Rouge, LA, USA; La. Geol. Surv., USA.
Geological Survey Circular, C-1018, 75-88, 1988.

Descriptors: *Gulf of Mexico/*Gulf Coastal Plain/oceanography/economic geology/ocean floors/mineral resources/continental margin/USGS/North American Atlantic/North Atlantic/Atlantic Ocean/North America; cartography/United States Exclusive Economic Zone/06 (PETROLOGY/SEDIMENTARY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Sedimentary development of the Louisiana continental shelf related to sea level cycles; Part II, Seismic response.
Coleman, J. M.; H. H. Roberts. La. State Univ., Coast. Stud. Inst. Sci. Geosci., Baton Rouge, LA, USA.
Geo-Marine Letters 8: 2, pp. 109-119, 1988.

Descriptors:*Louisiana/*sediments/*sedimentaryrocks/oceanography/clasticsediments/clasticrocks/geophysicalsurveys/continental shelf/lithostratigraphy/sandstone/seismic surveys; Southern U.S./United States/changes of level/seismic stratigraph; cyclic processes/deltaic environment/stratigraphy; chronostratigraphy/Gulf of Mexico/North American Atlantic/North Atlantic/Atlantic Ocean/Quaternary/gravel/clay/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Alaska. United States outer continental shelf basins; maps & descriptions
Comer, D.; B. M. Herman; P. Hoose, et al. U.S. Min. Man. Serv., MMS 86-0048, 27-54, 1986.

Descriptors: *Alaska/oceanography/maps/continental shelf/Western U.S./United States/bathymetric map; explanatory text/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Digital shipboard gravity and magnetic data collected in 1976 in the southern Bering Sea,
Cooper, A. K.; M. S. Marlow; J. R. Childs. U. S. Geol. Surv., Menlo Park, CA, USA.
Open-File Report (United States Geological Survey. 1978) OF-85-0237, 6, 1985.
Descriptors: *Bering Sea/*Alaska/*automatic data processing/geophysical surveys/oceanography/surveys/continental shelf/ocean floors/USGS/Pacific Ocean/United States/gravity surveys/magnetic surveys/marine methods/geophysical methods/digital simulation/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

GLORIA study of the Exclusive Economic Zone off Alaska, southern Bering Sea; initial report for cruise F4-86-BS, 3 September to 30 September 1986.
Cooper, A.;A. J. Stevenson;N. Kenyon, et al. Inst. Oceanogr. Sci., GBR; U. S. Geol. Surv., Menlo Park, CA, USA
Open-File Report (United States Geological Survey. 1978) OF-86-0596, 19, 1986.

Descriptors: *Bering Sea/*Alaska/oceanography/geophysical surveys/ocean floors/surveys/continental slope/USGS/West Pacific/Pacific Ocean/Western U.S./United States/United States Exclusive Economic Zone/GLORIA/EEZ-SCAN/side-scanning methods/sonar methods; acoustical surveys/gravity surveys/magnetic surveys/seismic surveys/bathymetry/Aleutian Ridge/Aleutian Basin/Umnak Plateau; Bowers Ridge/bottom features/data acquisition/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

GLORIA study of the Exclusive Economic Zone off Alaska--southern Bering Sea (Bowers Basin); initial report for Cruise F1-87-BS 28, June to 27 July 1987.
Cooper, A.;R. Hunter;Q. Huggett, et al.
Open-File Report (United States Geological Survey. 1978) OF-87-0579, 19, 1987.

Descriptors: *Alaska/*Bering Sea/oceanography/geophysical surveys/ocean floors/surveys/USGS/Western U.S./United States/West Pacifi; Pacific Ocean/Bowers Basin/Bowers Ridge/United States Exclusive Economic Zone/GLORIA/bathymetry/seismic surveys/gravity surveys; magnetic surveys/acoustical surveys/data acquisition/mass movements/bottom features/geologic hazards/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)/22 (ENGINEERING & ENVIRONMENTAL GEOLOGY)

The Early Cretaceous platform off Northwest Florida; controls on morphologic development of carbonate margins.
Corso, W.; J. A., Jr. Austin; R. T. Buffler. Sea Educ. Assoc., Woods Hole, MA, USA; Univ. Tex. Inst. Geophys., USA.
Marine Geology 86: 11-14, 1989.

Descriptors: *Florida/*Gulf of Mexico/*paleogeography/*sedimentation/oceanography/geophysical surveys/Cretaceous/sedimentation rates/continental margin/seismic surveys/ocean floors/marine sedimentation/Southeastern U.S./Eastern U.S./United States; northwestern Florida/North American Atlantic/North Atlantic; Atlantic Ocean/Lower Cretaceous/carbonate platforms/lithofacies; carbonate sediments/marine sediments/bottom features/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)/12 (STRATIGRAPHY/HISTORICAL GEOLOGY)

Quaternary stratigraphy and sedimentation of the inner continental shelf, San Diego County, California Shelf sands and sandstones. Calgary, AB, Canada, Jun. 15-17, 1984.
Darigo, N. J.; R. H. Osborne; R. J.(EDITOR) Knight, et. al. Enviropact, Hialeah, FL, USA; Shell Can., CAN; Univ. South. Calif., USA; Petro-Can., Calgary, AB, CAN.
Memoir - Canadian Society of Petroleum Geologists 11, 73-98, 1986.

Descriptors: *California/*sedimentation/oceanography/stratigraphy/geophysical surveys/controls/continental shelf/Quaternary/seismic surveys/tectonic controls/San Diego County/Pacific Coast/Western U.S./United States/Oceanside/La Jolla/Mission Beach/San Diego Bay/marine sediments/marine terrace; fines/sand/clastic sediments/gravel/submarine canyons/faults|ults/24 (SURFICIAL GEOLOGY,QUATERNARY GEOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Using kriging to map the ocean floor. 18. Annual Offshore Technology Conference Houston, TX (USA) 5-8 May 1986.
David, M.
PROC. OFFSHORE TECHNOL. CONF, pp. 433-440, 1986.

Abstract: A new method for gridding and contouring data in presence of trend is presented. It is universal kriging and the theory of intrinsic random functions of order k. It provides a way to test the quality of the interpolation. The method nas been applied to map the ocean floor in a part of the Continental slope, off the east coast of the U.S., where topography is highly variable and numerous canyons intersects the area. Tests have been made to define optimal data spacing and line orientation. Conclusions reached can be applied to other types of oceanographic data. The computer program with which this was done is briefly presented.

Eroded carbonate platform margin; the Blake Escarpment off southeastern United States. Atlas of seismic stratigraphy.
Dillon, W. P.; A. M. Trehu; P. C. Valentine, et. al. U. S. Geol. Surv., Woods Hole, MA, USA; Rice Univ., Houston, TX, USA.
AAPG Studies in Geology 27, Vol. 2, 140-147, 1988.

Descriptors: *Atlantic Ocean/*Atlantic Coastal Plain/stratigraphy/oceanography/geophysical surveys/Cretaceous/continental shelf/seismic surveys/Blake Plateau; Northwest Atlantic/United States/North America/seismic stratigraphy/DSDP Site 390/Leg 44/Deep Sea Drilling Project/DSDP Site 392/DSDP Site 534/Leg 76/IPOD/DSDP Site 391/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/12 (STRATIGRAPHY/HISTORICAL GEOLOGY)

Quaternary sedimentation of the Alaskan Beaufort Shelf; influence of regional tectonics, fluctuating sea levels, and glacial sediment sources. Geophysics of the Polar regions. Hamburg, Germany, Federal Republic of, Aug. 23-24, 1983.
Dinter, D. A.; E. S.(EDITOR) Husebye; G. L.(EDITOR) Johnson, et. al. U. S. Geol. Surv., Menlo Park, CA, USA; Off. Nav. Res., USA; Norw. Polar Res. Inst., NORNTNF/NORSAR, Kjeller, NOR.
Tectonophysics 114: 1-4, 133-161, 1985.

Descriptors: *Alaska/*Arctic Ocean/*sediments/*sedimentation/oceanography/geophysical surveys/stratigraphy/structural geology;

marine sediments/controls/continental shelf/seismic surveys/changes of level/Quaternary; neotectonics/lithostratigraphy/tectonic controls/Gubik Formation; United States/Beaufort Sea/Cenozoic/geophysical profiles; high-resolution methods/folds/ice rafting/marine sedimentation; interglacial environment/glaciomarine sedimentation/provenance; sedimentation rates/24 (SURFICIAL GEOLOGY,QUATERNARY GEOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Morphology and growth history of Delgada Fan; implications for the Neogene evolution of Point Arena Basin and the Mendocino triple junction Special section on Geologic and tectonic evolution of the Mendocino triple junction region; Part 1.
Drake, D. E.; D. A. Cacchione; J. V. Gardner, et. al. U. S. Geol. Surv., Menlo Park, CA, USA; Inst. Oceanogr. Sci., GBR.
Journal of Geophysical Research, B, Solid Earth and Planets 94: 3, 3139-3158, 1989.

Descriptors: *Pacific Ocean/*Pacific Coast/*paleogeography/*sedimentation/oceanography/geophysical surveys/Neogene/controls/tectonophysic/ocean floors/continental margin/seismic surveys/tectonic controls; plate tectonics/Delgada Fan/Mendocino fracture zone/Point Arena Basin/triple junctions/submarine fans/North American Pacific; Tertiary/acoustical surveys/Western U.S./United States/deep-sea sedimentation/18 (GEOPHYSICS/SOLID EARTH)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Crustal structure of the South Florida Platform, eastern Gulf of Mexico; an ocean-bottom seismograph refraction study.
Ebeniro, J. O.; W. P., Jr. O'Brien; F. J. Shaub. Univ. Tex. at Austin, Inst. Geophys., Austin, TX, USA.
Marine Geophysical Researches 8: 4, 363-382, 1986.

Descriptors: *Florida/oceanography/geophysical surveys/tectonophysics/continental margin/seismic surveys/crust/Southeastern U.S./Eastern U.S./United States/Gulf of Mexico/North American Atlantic/North Atlantic/Atlantic Ocean/Gulf Coastal Plain/North America/South Florida Platform/digital simulation/ocean-bottom seismographs; oceanic crust/velocity structure/Sarasota Arch/basement/automated analysis/marine methods/Sheffield Arch/P-waves/body waves/elastic waves/18 (GEOPHYSICS/SOLID EARTH)/07 (MARINE GEOLOGY AND OCEANOGRAPHY); 20 (GEOPHYSICS/APPLIED)

Sedimentary and crustal structure of the northwestern Gulf of Mexico.
Ebeniro, J. O.; Y. Nakamura; D. S. Sawyer, et. al. Univ. Tex., Dep. Geol. Sci., Austin, TX, USA.
Journal of Geophysical Research, B, Solid Earth and Planets 93: 8, 9075-9092, 1988.

Descriptors: *Gulf of Mexico/*seismology/*Texas/geophysical surveys/tectonophysics/crust/oceanography/seismic surveys/velocity structure/continental margin/North American Atlantic/North Atlantic/Atlantic Ocean/Southwestern U.S.; United States/ocean bottom seismographs/marine sediments/upper mantle/mantle/thickness/transition zones/18 (GEOPHYSICS/SOLID EARTH)/19 (GEOPHYSICS/SEISMOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Observations in Monterey Canyon and fan valley using the submersible Alvin and a photographic sled.
Eittreim, S. L.; R. W. Embley; W. R. Normark, et. al. NOAA, USA; U. S. Geol. Surv., Menlo Park, CA, USA.
Open-File Report (United States Geological Survey. 1978) OF 89-0291, 28, 21 sheet, 1989.

Descriptors: *Pacific Ocean/*California/oceanography/ocean floors/continental margin/USGS/North American Pacific; Pacific Coast/Western U.S./United States/submarine canyons; submarine fans/data acquisition/submersibles/Alvin/photography; underwater photography/sampling/Monterey Fan/Monterey Canyon; marine geology maps/maps/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Map showing bottom topography of the Mid-Atlantic continental margin, Cape Cod to Albemarle Sound.
Escowitz, E. C.; G. W. Hill; R. W. Bowen. U. S. Geol. Surv., USA.
Miscellaneous Investigations Series - U.S. Geological Survey, I-1987-A, 1 sheet, 1988.
Descriptors: *Eastern U.S./*Atlantic Ocean/oceanography/continental margin/maps/USGS/United States/Atlantic Coastal Plai; North America/Central Atlantic Coastal Plain/North American Atlantic/North Atlantic/marine geology maps/bottom features; topography/data processing/automatic cartography/cartography/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

3-D view of erosional scars on U.S. Mid-Atlantic continental margin.
Farre, J. A.;W. B. F Ryan. Exxon Prod. Res., P.O. Box 2189, Houston, TX 77252-2189, USA.
AM. ASSOC. PET. GEOL. BULL, vol. 69, no. 6, pp. 923-932, 1985.

Abstract: Deep-towed side-scan and bathymetric data have been merged to present a 3-D view of the lower continental slope and upper continental rise offshore Atlantic City, New Jersey. Carteret Canyon narrows and becomes nearly stranded on the lower slope where it leads into one of two steep-walled, flat-floored erosional chutes. The floors of the chutes, cut into semilithified middle Eocene siliceous limestones, are marked by downslope-trending grooves. The grooves are interpreted to be gouge marks formed during rock and sediment slides. On the uppermost rise, beneath the chutes, is a 40-m deep depression. The origin of the depression is believed to be related to material moving downslope and encountering the change in gradient at the slope/rise boundary. Downslope of the depression are channels, trails, and allochthonous blocks.

Surficial geology of the continental margin offshore New Jersey in the vicinity of Deep Sea Drilling Project sites 612 an 613. Initial reports of the Deep Sea Drilling Project covering Leg 95 of the cruises of the drilling vessel Glomar Challenger, St. John's, Newfoundland, to Ft. Lauderdale, Florida, August-September 1983.
Farre, J. A.; W. B. F. Ryan; C. W. Poag, et. al. Lamont-Doherty Geol. Obs., Palisades, NY, USA; Lamont-Doherty Geol. Obs., USA; Univ. Pierre et Marie Curie, FRA; Plymouth Polytech., GBR; Univ. Tokyo, JPN; Princeton Univ., USA; Scripps Inst. Oceanogr., USA; City Univ., N.Y., USA; Woods Hole Oceanogr. Inst., USA; Univ. Bonn, DEU ; Mass. Inst. Technol., USA; U. S. Geol. Surv., Woods Hole, MA, USA.
Initial Reports of the Deep Sea Drilling Project 95, 725-759, 1987.

Descriptors: *geomorphology/*New Jersey/landform description/oceanography/geophysical surveys/surficial geology/continental margin/seismic surveys/Deep Sea Drilling Project/Leg 95/DSDP Site 612/DSDP Site 613/Eastern U.S; United States/geophysical profiles/continental slope/continental rise/limestone/carbonate rocks/submarine canyons/topography/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Sediment patterns resulting from liquefaction of a shelf sand body. Shelf sands and sandstones. Calgary, AB, Canada, Jun. 15-17, 1984.

Field, M. E.; B. D. Edwards; H. Chezar, et. al. U. S. Geol. Surv., Menlo Park, CA, USA; Shell Can., CAN; Petro-Can., Calgary, AB, CAN.
Memoir - Canadian Society of Petroleum Geologists 11:333-334, 1986.

Descriptors: *California/oceanography/continental shelf/sediments/patterns/liquefaction/sand bodies; planar bedding structures/sedimentary structures/Northern California/Pacific Coast/Western U.S./United States/seismic surveys/geophysical surveys/ocean floors/Klamath River delta/san; clastic sediments/failures/Pacific Ocean/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Seafloor gas seeps triggered by a Northern California earthquake.
Field, M. E.; A. E. Jennings. U. S. Geol. Surv., Menlo Park, CA, USA.
Marine Geology 77: 1-2, 39-51, 1987.

Abstract: A series of marine surveys using high-resolution seismic-reflection and side-scan sonar profiling was conducted on the Klamath River delta from 1977 to 1985. In November 1980, near the middle of this 8-year time period, a major earthquake (magnitude 7) occurred in the area. The earthquake caused liquefaction of shelf deposits off the Klamath River. Analyses indicate that a change in gas seepage occurred after the earthquake. There was a marked increase in gas abundance immediately after the earthquake, gradual decrease over the next year, and stabilization at preearthquake gas levels within five years or less. The acoustic anomalies were observed in pre-Quaternary rocks as well as in surficial Holocene deposits, and gas seeps overlay truncated anticlines, faults, and syncline exposures. Thus, the gas released may have been in part thermogenic in origin. A large area (20 km 2) on the delta failed during the earthquake, and the abundance of gas seeps and craters in the area suggests that sediment degassing may have been an important process contributing to failure.--Modified journal abstract.

Gas hydrates on the Northern California continental margin
Field, M. E.; K. A. Kvenvolden. U. S. Geol. Surv., Menlo Park, CA, USA.
Geology (Boulder) 13: 7, 517-520, 1985.

Descriptors: *California/*Pacific Ocean/*organic materials/*sediments/oceanography/geophysical surveys/economic geology/hydrocarbons; marine sediments/continental shelf/seismic surveys/natural gas/methane/United States/Northern California/North American Pacific/continental margin/plateaus/offshore/possibilities/acoustical surveys; reflection methods/seismic methods/gas hydrates/hydrates/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Quaternary acoustic stratigraphy between the Colville River and Prudhoe Bay, Beaufort Sea shelf, Alaska.
Foster, D. S. U. S. Geol. Surv., Menlo Park, CA, USA.
Open-File Report (United States Geological Survey. 1978) OF 88-0276, 108, 23 sheets, 1988.

Descriptors: *Alaska/*Arctic Ocean/stratigraphy/geophysical surveys/oceanography/engineering geology|gy/Quaternary/acoustical surveys/continental shelf/permafrost/Gubik Formation/USGS/Western U.S./United States/northern Alaska; Beaufort Sea/Prudhoe Bay/Colville River/seismic stratigraphy; seismic profiles/fuel resources/geologic hazards/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)/24 (SURFICIAL GEOLOGY,QUATERNARY GEOLOGY)

Sonograph mosaic of U.S. West Coast Exclusive Economic Zone. AAPG fourth Circum-Pacific energy and mineral resources conference.
Gardner, J. V.;D. A. Cacchione;D. E. Drake, et al. U. S. Geol. Surv., Menlo Park, CA, USA; Inst. Oceanogr. Sci., GBR
AAPG Bulletin 70: 7,922-923, 1986.

Descriptors: *Pacific Coast/geophysical surveys/oceanography/acoustical surveys/ocean floors/United States Exclusive Economic Zone/Western U.S./United States/California/Oregon/Washington; offshore/side-scanning methods/sonar methods/spreading centers; seamounts/fracture zones/submarine fans/canyons/abyssal plains; Nitinat Fan/Astoria Fan/Delgada Fan/Monterey Fan/channels/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

GLORIA mosaic of West Coast U.S. Exclusive Economic Zone, southern sector AAPG annual convention with divisions; SEPM/EMD/DPA.
Gardner, J. V.;B. D. Edwards;M. E. Field, et al. U. S. Geol. Surv., Menlo Park, CA, USA; Inst. Oceanogr. Sci., GBR
AAPG Bulletin 70: 5,593, 1986.

Descriptors: *Pacific Ocean/*Pacific Coast/oceanography/geophysical surveys/ocean floors/continental margin/acoustical surveys/GLORIA/United States Exclusive Economic Zone/seamounts/submarine fans/automated analysis/digital simulation/side-scanning methods/sonar methods; Mendocino Escarpment/Redondo Basin/Hueneme Basin/Arguello Fan; Farallon Fan/Monterey Fan/Delgada Fan/Baja Seamount/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Cruise report for EEZ-SCAN 86 cruise F3-86, Zhemchug Canyon and central Aleutian Basin, Bering Sea; August 6 through September 1, 1986.
Gardner, J. V.;H. A. Karl;Q. Huggett, et al.Inst. Oceanogr. Sci., GBR; U. S. Geol. Surv., Menlo Park, CA, USA.
Open-File Report (United States Geological Survey. 1978) OF 86-0587, 11, 1986.

Descriptors: *Bering Sea/*Alaska/oceanography/geophysical surveys/ocean floors/surveys/continental margin/USGS/West Pacific/Pacific Ocean/Aleutian Basin/United States Exclusive Economic Zone/EEZ-SCA; GLORIA/seismic surveys/bathymetry/gravity surveys/magnetic surveys/Western U.S./United States/geophysical profiles/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Miocene paleoceanographic event in the eastern Gulf of Mexico; implications for stratigraphic evolution and Gulf Stream circulation The Geological Society of America, 98th annual meeting. Orlando, FL, United States, Oct. 28-31, 1985.
Gardulski, A.; H. T. Muellins. Syracuse Univ., Dep. Geol., Syracuse, NY, USA. Abstracts with Programs - Geological Society of America 17: 7, 588, 1985.

Descriptors:*GulfofMexico/*sedimentation/*paleoclimatology/stratigraphy/Miocene/oceanography/transport/oceancirculation/marine transport/North American Atlantic/North Atlantic/Atlantic Ocean/Neogene/Tertiary/paleo-oceanography; eastern Gulf of Mexico/Gulf Stream/currents/evolution/seismic surveys/geophysical surveys/continental shelf/unconformities;Florida/Southeastern U.S./Eastern

U.S./United States/allochems; Loop Current/12 (STRATIGRAPHY/HISTORICAL GEOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Multichannel seismic-reflection data collected in 1980 in the eastern Chukchi Sea.
Grantz, A.; D. M. Mann; S. D. May. U. S. Geol. Surv., Menlo Park, CA, USA.
Open-File Report (United States Geological Survey. 1978) OF 86-0405, 4 21 sheet, 1986.

Descriptors: *Alaska/*Arctic Ocean/oceanography/geophysical surveys/continental margin/seismic surveys/maps/USGS/Western U.S./United States/Chukchi Sea/seismic survey maps/site location maps; reflection methods/multichannel methods/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Structure of the continental shelf north of the Arctic National Wildlife Refuge Petroleum geology of the northern part of the Arctic National Wildlife Refuge, northeastern Alaska.
Grantz, A.; D. A. Dinter; R. C. Culotta, et. al. U. S. Geol. Surv., Menlo Park, CA, USAU. S. Geol. Surv., Menlo Park, CA, USA.
Geological Survey Bulletin (Washington) B-1778, 271-276, 1987.

Descriptors: *Alaska/*Arctic Ocean/economic geology/oceanography/structural geology/geophysical surveys/petroleum/continental shelf/neotectonics/seismic surveys/USGS; Western U.S./United States/northeastern Alaska/Arctic Coastal Plain/Arctic National Wildlife Refuge/seismic stratigraphy; decollement/thrust faults/faults/normal faults/anticlines/fold; tectonic elements/tectonics/inner shelf/reflection methods; seismic profiles/Beaufort Sea/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/16 (STRUCTURAL GEOLOGY)/29 (ECONOMIC GEOLOGY/ENERGY SOURCES)

Regional geology and petroleum potential of the United States Beaufort and northeasternmost Chukchi seas. In: Geology and resource potential of the continental margin of western North America and adjacent ocean basins, Beaufort Sea to Baja California.
Grantz, A.; S. D. May; D. A. Dinter, et. al. U. S. Geol. Surv., Menlo Park, CA, USA.
Circum-Pacific Council for Energy and Mineral Resources, Earth Science Series 6, 17-35, 1987.

Descriptors: *Arctic Ocean/*Alaska/economic geology/oceanography/geophysical surveys/petroleum/continental shelf/seismic surveys/Beaufort Sea/Chukchi Sea/passive margins/Neocomian/Lower Cretaceous/Cretaceous/Prudhoe Bay/Western U.S./United States/sandstone/clastic rocks/shale; conglomerate/limestone/carbonate rocks/reflection/Dinkum Grabe; common-depth-point method/Kaktovik Basin/Nuwuk Basin/Canada Basi; thermal maturity/faults/folds/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/29 (ECONOMIC GEOLOGY/ENERGY SOURCES)

California continental margin map series. In: AAPG fourth Circum-Pacific energy and mineral resources conference. Singapore, Aug. 17-22, 1986.
Greene, H. G.; M. P. Kennedy. U. S. Geol. Surv., Menlo Park, CA, USA; Calif. State Div. Mines and Geol., USA.
AAPG Bulletin 70: 7, 924, 1986.

Descriptors: *California/oceanography/continental margin/maps/Pacific Coast/Western U.S./United State; marine geology/marine geology maps/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Tertiary depositional sequences, offshore New Jersey and Alabama. Atlas of seismic stratigraphy.
Greenlee, S. M.; A. W.(EDITOR) Bally. Exxon Prod. Res. Co., Houston, TX, USA; Rice Univ., Houston, TX, USA.
AAPG Studies in Geology 27, Vol. 2, 67-80, 1988.

Descriptors: *New Jersey/*Alabama/*Atlantic Ocean/sedimentary petrology/oceanography/geophysical surveys/sediments/seismic surveys/Eastern U.S./United States/Southern U.S; Tertiary/seismic stratigraphy/continental margin/Miocene/Neogen; Lower Cretaceous/Cretaceous/Paleocene/Paleogene/Maestrichtian; Senonian/Upper Cretaceous/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Pacific. United States outer continental shelf basins; maps & descriptions.
Griggs, D.; F. Webster; G. E. Dellagiarino. U.S. Min. Man. Serv., MMS 86-0048, 19-26, 1986.

Descriptors: *Pacific Ocean/*United States/oceanography/maps/continental shelf/bathymetric maps/explanatory text/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Quaternary sedimentation in Shelikof Strait, Alaska.
Hampton, M. A. U. S. Geol. Surv., Menlo Park, CA, USA.
Marine Geology 62: 3-4213-253, 1985.

Descriptors: *Alaska/*Pacific Ocean/*sediments/*sedimentation/oceanography/geophysical surveys/marine sediments/processes/continental shelf/ocean circulation/seismic surveys/environmental analysis/marine sedimentation/United States/Shelikof Strait/Gulf of Alaska/channels/glacial sedimentation/glaciomarine sedimentatio; bottom features/nearshore sedimentation/currents/marine transpor; reflection methods/seismic methods/paleocirculation; paleooceanography/cores/sedimentary structures/planar bedding structures/stratification/textures/grain size/geophysical profile/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/24 (SURFICIAL GEOLOGY,QUATERNARY GEOLOGY)

GLORIA mosaic of West Coast U.S. Exclusive Economic Zone, northern sector. AAPG annual convention with divisions; SEPM/EMD/DPA; technical program and abstracts.
Hampton, M. A.;D. A. Cacchione;D. E. Drake, et al. U. S. Geol. Surv., Menlo Park, CA, USA; Inst. Oceanogr. Sci., GBR
AAPG Bulletin 70: 5,598, 1986.

Descriptors: *Pacific Ocean/*Pacific Coast/oceanography/geophysical surveys/ocean floors/continental margin/acoustical surveys/side-scanning methods/sonar methods/GLORIA/United States Exclusive Economic Zon; mosaic/submarine canyons/Gorda Rise/Juan de Fuca Ridge/Mendocino fracture zone/Blanco fracture zone/submarine fans/diapirs; sea-floor spreading/plate convergence/transform faults/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Geomorphic features of Oregon-Washington Project REZ-SCAN. AAPG annual convention with divisions SEPM/EMD/DPA.

Hampton, M. A.;H. A. Karl;N. H. Kenyon, et al. U. S. Geol. Surv., Menlo Park, CA, USA; Inst. Oceanogr. Sci., GBR
AAPG Bulletin 69: 2,262, 1985.

Descriptors: *Oregon/*Washington/*Pacific Ocean/oceanography/continental slope/marine geology/Juan de Fuca Ridge/Gorda Rise; Blanco fracture zone/submarine canyons/submarine fans/geophysical surveys/surveys/seismic surveys/acoustical surveys/side-scanning methods/reflection methods/sonar methods/EEZ-SCAN/United States Exclusive Economic Zone/oceanic crust/Cascadia Channel/volcanoes/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Sea-floor drainage features of Cascadia Basin and the adjacent continental slope, Northeast Pacific Ocean.
Hampton, M. A.; H. A. Karl; N. H. Kenyon. U. S. Geol. Surv., Menlo Park, CA, USA; Inst. Oceanogr. Sci., GBR.
Marine Geology 87: 2-4, 249-272, 1989.

Descriptors: acoustical surveys/continental slope/Northeast Pacific/North American Pacific/Cascadia Basin/GLORIA/ocean floors/submarine canyons/submarine fans/bottom features/Pacific Coast/Western U.S; United States/sonar methods/side-scanning methods/channels; seismic profiles/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Geologic framework, Cenozoic history, and modern processes of sedimentation on the North Carolina continental margin. SEPM field guidebooks, Southeastern United States, Third annual midyear meeting, 1986, Raleigh, North Carolina.
Hine, A. C.(leader); S. R.(leader) Riggs; D. A.(EDITOR) Textoris. Univ. South Fla., Dep. Mar. Sci., Saint Petersburg, FL, USA; East Carol. Univ., Dep. Geol., USA; Univ. N.C., Chapel Hill, NC, USA; Soc. Econ. Paleontol. and Mineral, 129-194, 1986.

Descriptors: *North Carolina/*sedimentation/*foraminifers/*algal flora/oceanography/environment/biostratigraphy/diatom flora/continental margin/Cenozoic/Southeastern U.S./Eastern U.S./United States/marine geology/Atlantic Coastal Plain/North America/marine sediments/marine terraces/geophysical surveys/surveys/seismic surveys/acoustical surveys/hurricanes/Diana/duricrust/chemically precipitated rocks/Onslow Bay/Cape Fear/phosphate deposits; guidebook/microfossils/24 (SURFICIAL GEOLOGY,QUATERNARY GEOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Coastal lithosome preservation; evidence from the shoreface and inner continental shelf off Bogue Banks, North Carolina Barrier Islands.
Hine, A. C.; S. W. Snyder; G. F.(EDITOR) Oertel, et. al. Univ. South Fla., Dep. Mar. Sci., St. Petersburg, FL, USA; Univ. Md., USA;Old Dominion Univ., Dep. Oceanogr., Norfolk, VA, USA.
Marine Geology 63: 1-4, 307-330, 1985.

Descriptors: *North Carolina/*geomorphology/*Atlantic Coastal Plain/*sediments; *Atlantic Ocean/shore features/oceanography/marine sediments/geophysical surveys/changes of level/continental shelf/landform evolution/environmental analysis/seismic surveys/United States/North America/Bogue Bank; lithosomes/nearshore environment/barrier islands/Onslow Bay; Quaternary/Cenozoic/Neogene/Tertiary/channels/inner shelf; geophysical profiles/North American Atlantic/cores/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/23 (SURFICIAL GEOLOGY, GEOMORPHOLOGY)

Coarse-sediment bands on the inner shelf of southern Monterey Bay, California.
Hunter, R. E.; J. R. Dingler; R. J. Anima, et. al. U. S. Geol. Surv., Menlo Park, CA, USA.
Marine Geology 80: 1-2, 81-98, 1988.

Descriptors: *California/*Pacific Ocean/*sediments/*sedimentation/oceanography/geophysical surveys/marine sediments/transport/continental shelf/acoustical surveys/textures/marine transport; Monterey County/Pacific Coast/Western U.S./United States/Central California/Monterey Bay/inner shelf/North American Pacific; side-scanning methods/sonar methods/coarse-grained materials/san; clastic sediments/nearshore sedimentation/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

An offshore Mesozoic igneous sequence, Georges Bank basin, North Atlantic.
Hurtubise, D. O.; J. H. Pluffer; H. L. Cousminer. Mobil Oil, Denver, CO, USA; Rutgers Univ., USA; U. S. Miner. Manage. Serv., USA.
Geological Society of America Bulletin 98: 4, 430-438, 1987.

Descriptors: *Atlantic Ocean/*igneous rocks/*palynomorphs/*absolute age/petrology/volcanic rocks/biostratigraphy/dates/genesis/Mesozoic/volcaniclastics/basalts/geochemistry/cores; chemical composition/alkalic composition/fuel resources/Georges Bank/North American Atlantic/North Atlantic/marginal basins; Georges Bank basin/continental shelf/oceanography/major elements; trace elements/microfossils/K/Ar/intrusive rocks/Middle Jurassi; Jurassic/Lower Cretaceous/Cretaceous/New England/Eastern U.S.; United States/seismic surveys/geophysical surveys/05 (PETROLOGY/IGNEOUS AND METAMORPHIC)/02 (GEOCHEMISTRY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Mobo reflections from the Long Island Platform, Eastern United States. Reflection seismology; the continental crust. Ithaca, NY, United States, June 26-28, 1984.
Hutchinson, D. R.; J. A. Grow; K. D. Klitgord, et. al. U. S. Geol. Surv., Woods Hole, MA, USA; Univ. R.I., USA; Cornell Univ., Inst. Stud. Cont., Ithaca, NY, USA.
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Processing and attenuation of noise in deep seismic-reflection data from the Gulf of Maine.
Hutchinson, D. R.;M. W. Lee. US Geol. Survey, Woods Hole, MA, USA.
Mar. Geophys. Res. (Netherlands) vol.11, no.1, pp.51-67, 1989.

Abstract: The US Geological Survey deep crustal studies reflection profile across the Gulf of Maine off southeastern New England

was affected by three sources of noise: side-scattered noise, multiples, and 20-Hz whale sounds. The special processing most effective in minimizing this noise consisted of a combination of frequency-wavenumber (F-K) filtering, predictive deconvolution, and spectral whitening, each applied in the shot domain (prestack). The prestack noise suppression processing techniques resulted in a reflection profile with good signal-to-noise ratios and reliable strong reflection, especially at depths equivalent to the lower crust (24-34 km). Certain geologic features, such as a buried rift basin and a crustal fault are resolved much better within the upper crust after this processing. Finite difference migration of these data produced excellent results. Migration was essential to distinguish between abundant dipping and subhorizontal reflections in the lower crust as well as to show an essentially transparent upper mantle.

Internal-wave currents as a mechanism to account for large sand waves in Navarinsky Canyon head, Bering Sea.
Karl, H. A.; D. A. Cacchione; P. R. Carlson. U. S. Geol. Surv., Menlo Park, CA, USA.
Journal of Sedimentary Petrology 56: 5, 706-714, 1986.

Descriptors: *Bering Sea/*Alaska/oceanography/geophysical surveys/ocean floors/ocean waves/ocean circulation/seismic surveys; continental margin/West Pacific/Pacific Ocean/Navarin Basin; Navarinsky Canyon/submarine canyons/Western U.S./United States; bottom features/bedforms/sand waves/bedding plane irregularities; sedimentary structures/internal waves/ocean currents/seismic profiles/reflection methods/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

GLORIA images of Zhemchug Canyon and Bering channel-fan system, Bering Sea Geologic studies in Alaska by the U.S. Geological Survey during 1986.
Karl, H. A.;J. V. Gardner;Q. Huggett, et al. U. S. Geol. Surv., USA.
Geological Survey Circular C-0998, 147-151, 1987.

Descriptors: *Alaska/*Bering Sea/oceanography/geophysical surveys/continental margin/ocean floors/acoustical surveys/USGS/Western U.S./United States/West Pacific/Pacific Ocean/Zhemchug Canyon; Beringia/Bering Channel/Bering Fan/submarine canyons/submarine fans/GLORIA/imagery/mosaics/sonar methods/United States Exclusive Economic Zone/side-scanning methods/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Lateral migration of Cascadia Channel in response to accretionary tectonics.
Karl, H. A.; M. A. Hampton; N. H. Kenyon. U. S. Geol. Surv., Menlo Park, CA, USA; Inst. Oceanogr. Sci., GBR.
Geology (Boulder) 17: 2, 144-147, 1989.

Descriptors: *Washington/*Oregon/*Pacific Coast/*Pacific Ocean/oceanography/geophysical surveys/tectonophysics/continental slope/continental margin/acoustical surveys/plate tectonics/Western U.S./United States/Cascadia Basin/Cascadia Channel/accretion/North American Pacific/channels/bottom feature; migration/sonar methods/side-scanning methods/terraces/tectonic controls/ocean floors/seismic surveys/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/18 (GEOPHYSICS/SOLID EARTH); 20 (GEOPHYSICS/APPLIED)

Comparisons of the morphology of hot spot and ridge-crest seamounts within the EEZ of Hawaii. Geological Society of America; Cordilleran Section, 83rd annual meeting.
Keating, B. H. Univ. Hawaii, Hawaii Inst. Geophys., Honolulu, HI, USA
Abstracts with Programs - Geological Society of America 19: 6,393, 1987.

Descriptors: *Hawaii/*Pacific Ocean/oceanography/ocean floors/East Pacific Ocean Islands/Polynesia/United States; seamounts/United States Exclusive Economic Zone/islands/atolls; hot spots/Upper Cretaceous/Cretaceous/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Seismic investigation of the Tybee trough area, Georgia-South Carolina.
Kellam, J. A.; V. J. Henry. Ga. Geol. Surv., Atlanta, GA, USA; Ga. State Univ., USA.
Southeastern Geology 28: 2, 65-80, 1987.

Descriptors: *Georgia/*South Carolina/oceanography/geophysical surveys/continental shelf/seismic surveys/Tybee Trough/Southeastern U.S.; Eastern U.S./United States/anomalies/offshore/Atlantic Coastal Plain/North America/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Observations from DSRV Alvin of Quaternary faulting on the Southern California continental margin.
Kennedy, M. P.; S. H. Clarke; H. G. Greene, et. al. U. S. Geol. Surv., Menlo Park, CA, USA.
Open-File Report (United States Geological Survey. 1978) OF 85-0039, 26, 1985.

Descriptors: *California/*Pacific Ocean/oceanography/structural geology/geophysical surveys/continental margin/neotectonics/seismic surveys/marine geology; USGS/United States/Southern California/continental borderland; North American Pacific/faults/Quaternary/Cenozoic/seismotectonic; active faults/fault scarps/reflection methods/seismic methods; bathymetry/seismicity/16 (STRUCTURAL GEOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

MV FARNELLA Cruises 1/84-4/84: 26 April - 15 August 1984. GLORIA Studies of the Exclusive Economic Zone off the Western United States between 30 deg 30 min and 48 deg 30 min see N.
Kenyon, N. H. ;D. G. Masson. Institute of Oceanographic Sciences, Wormley (England) 29p, 1985.

Abstract: EEZ-SCAN was a co-operative research program between the United States Geological Survey (USGS) and the Institute of Oceanographic Sciences (IOS). The major aim of the program was to undertake a reconnaissance survey of the entire United States exclusive economic zone (EEZ) adjacent to the western United States using the long-range sidescan sonar, GLORIA. In addition to GLORIA data, single-channel airgun seismic reflection profiles, 3.5 kHz and 10 kHz high-resolution profiles and magnetic anomaly profiles were continuously collected during the program. Specific objectives of Leg 1 were to: Obtain overlapping sidescan sonar coverage from the US-Mexican Border. Survey as much of the bathymetrically-complex southern California Continental Borderland as possible.

MV FARNELLA Cruises 1/85-4/85: 7 August - 3 December 1985. GLORIA Studies of the Exclusive Economic Zone off the Eastern United States of America, Gulf of Mexico and Puerto Rico.
Kenyon, N. H. ;D. G. Masson;L. M. Parson, et al. Institute of Oceanographic Sciences, Wormley (England) 24p, 1986.

Abstract: The scientific objectives of the cruise were: To complete a reconnaissance survey using overlapping sidescan data of the western part of the Gulf of Mexico lying within the US 200 nautical mile zone and in waters deeper than approximately 500m; To complete sonar and seismic cover of the complex continental slope west of the Mississippi Fan, extensively deformed during recent salt tectonism; To complete the sonar cover of the East Breaks Slide, a major submarine failure, first surveyed in part during the 6/82 Farnella cruise.

Seismic stratigraphy of the Mississippi-Alabama shelf and upper continental slope.
Kindinger, J. L. U. S. Geol. Surv., Miami Beach, FL, USA.
Marine Geology 83: 1-4, 79-94, 1988.

Descriptors: *Mississippi/*Alabama/*Gulf Coastal Plain/*sedimentation/*Gulf of Mexico/*sediments/oceanography/stratigraphy/cyclic processes/geophysical surveys; marine sediments/continental margin/continental shelf/continental slope/Quaternary; changes of level/marine sedimentation/seismic surveys; lithostratigraphy/Southern U.S./United States/North America/inner slope/seismic stratigraphy/upper Quaternary/nearshore sedimentatio; seismic profiles/North American Atlantic/North Atlantic/Atlantic Ocean/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/24 (SURFICIAL GEOLOGY,QUATERNARY GEOLOGY)/20 (GEOPHYSICS/APPLIED)

Map showing sedimentary basins of onshore and continental shelf areas, Alaska.
Kirschner, C. E. U. S. Geol. Surv., USA.
Miscellaneous Investigations Series - U.S. Geological Survey, I-1873, 1 sheet, 1988.

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Continental margin mapping project, U.S. Atlantic margin; a synthesis of geologic and geophysical data interpretations. AAPG annual convention with divisions; SEPM/EMD/DPA; technical program and abstracts.
Klitgord, K. D.;G. H. Hill. U. S. Geol. Surv., Woods Hole, MA, USA.
AAPG Bulletin 70: 5,608, 1986.

Descriptors: *Atlantic Coastal Plain/oceanography/geophysical surveys/continental margin/maps/surveys/United States Exclusive Economic Zone/data processing/data bases/digital simulation/marine geology maps/gravity anomalies/magnetic anomalies/seismic surveys; seismicity/Baltimore Canyon/Georges Bank/Carolina Trough/Gulf of Maine/Blake Plateau/bathymetry/North American Atlantic/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

U.S. Atlantic continental margin; structural and tectonic framework The Atlantic continental margin; U.S. The geology of North America.
Klitgord, K. D.; D. R. Hutchinson; H. Schouten, et. al. U. S. Geol. Surv., Woods Hole, MA, USA; U. S. Geol. Surv., USA; Woods Hole Oceanogr. Inst., USA; Rutgers Univ., Dep. Geol. Sci., New Brunswick, NJ, USA.
Geol. Soc. Am. I-2, 19-55, 1988.

Descriptors: *Atlantic Coastal Plain/*Atlantic Ocean/oceanography/geophysical surveys/structural geology/continental margin/surveys/tectonics/United States/North Americ; passive margins/evaluation/extension tectonics/seismic surveys; reflection/gravity anomalies/gravity surveys/magnetic surveys; magnetic anomalies/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/16 (STRUCTURAL GEOLOGY)

Maps showing sea-floor topography, depth to bedrock, and sediment thickness, Penobscot Bay, Maine.
Knebel, H. J.; K. M. Scanlon. U. S. Geol. Surv., USA.
U. S. Geol. Surv., Misc. Field Stud. Map MF-1751, 25 sheets, 1985.

Descriptors: *Maine/*Atlantic Ocean/*sediments/oceanography/marine sediments/maps/continental shelf/thickness/USGS/United States/Penobscot Ba; North American Atlantic/bathymetric maps/bottom features/bedrock|ck/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Sedimentary framework of Penobscot Bay, Maine.
Knebel, H. J.; K. M. Scanlon. U. S. Geol. Surv., Woods Hole, MA, USA.
Marine Geology 65: 3-4, 305-324, 1985.

Descriptors: Maine/*Atlantic ocean/*sediments/*sedimentation/stratigraphy/oceanography/geophysical surveys/marine sediments; processes/changes of level/continental shelf/seismic surveys/environmental analysis/nearshore sedimentation/Knox County/Waldo County/Hancock County/United States/Penobscot Bay/North American Atlantic; geophysical profiles/reflection methods/seismic methods/drift; clastic sediments/Quaternary/Cenozoic/lithofacies/upper Quaternary/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/24 (SURFICIAL GEOLOGY,QUATERNARY GEOLOGY)

Late Pleistocene drainage systems beneath Delaware Bay.
Knebel, H. J.; R. C. Circe. U. S. Geol. Surv., Woods Hole, MA, USA.
Marine Geology 78: 3-4, 285-302, 1988.

Descriptors: *Atlantic Ocean/*Delaware/*New Jersey/*paleogeography/geophysical surveys/oceanography/geomorphology/Pleistocene/seismic surveys/continental shelf/changes of level/Atlantic Coastal Plain/North American Atlantic/North Atlantic/Delaware River; Delaware Bay/Eastern U.S./United States/drainage patterns; landform evolution/seismic profiles/upper Pleistocene/Quaternary; North America/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)/23 (SURFICIAL GEOLOGY/GEOMORPHOLOGY)

Sedimentology of the mainland nearshore region of Santa Barbara Channel, California Shelf sands and sandstones. Calgary, AB, Canada, Jun. 15-17, 1984.
Kolpack, R. L.; R. J.(EDITOR) Knight; J. R.(EDITOR) McLean. Mar. Processes Res., West Covina, CA, USA; Shell Can., CAN; Petro-Can., Calgary, AB, CAN.
Memoir - Canadian Society of Petroleum Geologists 11, 57-72, 1986.

Descriptors: *California/*sedimentation/oceanography/transport/continental shelf/littoral drift/Santa Barbara Channel/Pacific Coast/Western U.S./United States/Point Conception/nearshore environment/Holocene/Quaternary/sand/clastic sediments/silt/cla; Ventura/bathymetry/grain size/physical properties/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

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Kruse, W. A.;R. W. Schmieder.pp. 4-13, 1986.

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Nature of the deformation front along the Oregon-Washington subduction zone National Earthquake Prediction Evaluation Council, minutes of the meeting. Seattle, WA, United States, Apr. 2-3, 1987.
Kulm, L. D.; R. W. Embley; C. F.(EDITOR) Shearer. Oreg. State Univ., Coll. Oceanogr., Corvallis, OR, USA; NOAA, USAU. S. Geol. Surv., USA.
Open-File Report (United States Geological Survey. 1978) OF-88-0037, 185-195, 1988.

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Geologic structure and tectonic of the inner continental borderland, offshore northern Baja California, Mexico.
Legg, M. R. Univ. of California, Santa Barbara, CA, USA. Doctoral thesis, 618p., 1985.

Descriptors: *Mexico/*faults/oceanography/geophysical surveys/displacements/structural geology|gy/continental margin/surveys/right-lateral faults/tectonics/Baja California/California/Pacific Coast/Western U.S./United States; Southern California/acoustical surveys/plate boundaries/Pacific Plate/North American Plate/San Clemente Fault/bathymetry; structural provinces/continental borderland/seismic surveys/wrench faults/Cenozoic/sedimentation/sedimentation rates/applications; submarine canyons/submarine fans/relative age/Agua Blanca Fault; shear zones/transform faults;/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/16 (STRUCTURAL GEOLOGY)

Sea Beam survey of an active strike-slip fault: the San Clemente fault in the California Continental Borderland.
Legg, M. R.;B. P. Luyendyk;J. Mammerickx, et al. Dept. of Geol. Sci., California Univ., Santa Barbara, CA, USA.
J. Geophys. Res. (USA) vol.94, no.B2 1727-44, 10 Feb. 1989.

Abstract: The San Clemente fault is an active, northwest trending, right-lateral, wrench fault. Sea Beam data are used to map the major tectonic landforms associated with active submarine faulting. In the area between North San Clemente Basin and Fortymile Bank, the major late Cenozoic faults are delineated by alignments of numerous tectonic landforms, including scarps, linear trenches, benches, and sags. The character and spatial patterns of these landforms are consistent with dextral wrench faulting. The main trace of the San Clemente fault cuts a straight path directly across the rugged topography of the region, evidence of a steeply dipping fault surface. Basins or sags located at each right step in the en echelon pattern of faults are manifestations of pull-apart basin development in a right-slip fault zone. Seismic reflection profiles show offset reflectors and a graben in late Quaternary turbidites of the Navy Fan. Modern tectonic activity is demonstrated by numerous earthquakes with epicenters located along the fault's trend.

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Lockwood, M. NOAA, Charting and Geod. Serv., Rockville, MD, USA. NOAA, Natl. Ocean Serv, 62p., 1985.

Descriptors: *United States/oceanography/continental shelf/exclusive economic zone/bathymetry/geophysical surveys/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Meso-scale mapping of seafloor topography utilizing swath mapping technology; a description of NOAA's EEZ Mapping Project. Current practices and new technology in ocean engineering. New Orleans, LA, Feb. 23-27, 1986.
Lockwood, M.;G. E. Wheaton;T. E. McGuinness (Editor); H. H. Shih (Editor), et al. Natl. Ocean. and Atmos. Adm., Natl. Ocean Serv., Rockville, MD, USA; NOAA, Natl. Ocean Serv., USA; Brown and Root, USA. pp. 161-168, 1986.

Magnetic and bathymetric data from R/V Farnella cruises FRNL85-1, 85-2, and 85-3 in the U.S. Gulf of Mexico EEZ.
Lubinski, D. J.;D. C. Twichell.U . S. Geol. Surv., Woods Hole, MA, USA
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Descriptors: *Gulf of Mexico/geophysical surveys/surveys/USGS/North American Atlantic/North Atlantic/Atlantic Ocea; United States Exclusive Economic Zone/magnetic surveys/bathymetry; ocean floors/acoustical surveys/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

GLORIA side-scan and geophysical surveys of the central Bering Sea. Geologic studies in Alaska by the U.S. Geological Survey during 1986.
Marlow, M. S.;P. R. Carlson;S. V. Dadisman, et al.U. S. Geol. Surv., USA.
Geological Survey Circular C-0998, 152-156, 1987.

Descriptors: *Bering Sea/*Alaska/geophysical surveys/oceanography/surveys/continental slope/USGS/Western U.S./United States/West Pacific/Pacific Ocean/abyssal plains/ocean floors/acoustical surveys/side-scanning methods/sonar methods/GLORIA/United States Exclusive Economic Zone/bathymetry/seismic surveys/seismic profile; reflection methods/gravity surveys/bottom features/magnetic anomalies/sand waves/bedding plane irregularities/sedimentary structures/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Regional geology of the Beringian continental margin. Advances in earth and planetary sciences; formation of active ocean margins.

Marlow, M. S.; A. K. Cooper; N. E. Nasu, et. al. U. S. Geol. Surv., Pac.-Arct. Branch Mar. Geol., Menlo Park, CA, USA; Univ. Tokyo, JPN;Univ. Air, Chiba, JPN.Tokyo, Japan, Nov. 21-23, 1983. Terra Sci. Publ. Co.D. Reidel Publ. Co, 497-515, 1986.

Descriptors: *Pacific Ocean/*Alaska/geophysical surveys/oceanography/seismic surveys/continental margin/Beringia/Western U.S./United States/Bering Sea/West Pacific/Okhotsk-Chukotsk/Kula Plate; Mesozoic/Cretaceous/Tertiary/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Workshop 1; Scientific mapping and research to characterize the EEZ; Alaska.
Marlow, M. S.(chairperson);D. A.(chairperson) Wolfe.U. S. Geol. Surv., Menlo Park, CA, USA; NOAA, USA.
Geological Survey Circular, C-1018, 39-58, 1988.

Descriptors: *Pacific Ocean/*Alaska/economic geology/oceanography/mineral resources/ocean floors/continental margin/USGS/United States Exclusive Economic Zone/North American Pacific/Western U.S.; United States/offshore/cartography/bibliography/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

GLORIA surveys of the Exclusive Economic Zone around the United States of America.
Masson, D. G. Inst. Oceanogr. Sci., Wormley, UK
MIAS NEWS BULL, no. 8, pp. 3-5, 1985.

Abstract: GLORIA-II, designed primarily for work in the deep ocean, is a unique sidescan sonar developed at IOS. It uses a towed sonar "fish" to insonify a swathe up to 30 km wide on each side of the ship's track, the returning signals being plotted to produce a map-like sonograph of the sea floor. The "fish" is towed about 400 m behind the survey ship at a depth of 50 m. At a typical survey speed of 8 knots, up to 20,000 square kilometres can be surveyed per day, although shallow water or unfavourable acoustic propagation conditions may reduce this figure. This survey rate is some six to seven times greater than that of other long range sidescan sonars currently in operation.

Evolution of the Cape Fear Terrace; a complex interaction between the Gulf Stream and a paleo-shelf edge delta.
Matteucci, T. D.; A. C. Hine. Univ. South Fla., Dep. Mar. Sci., St. Petersburg, FL, USA.
Marine Geology 77: 3-4, 185-205, 1987.

Descriptors: *North Carolina/*Atlantic Ocean/*Atlantic Coastal Plain; *paleogeography/*sedimentation/oceanography/geophysical surveys/stratigraphy/Quaternary/processe/continental shelf/seismic surveys/changes of level/marine sedimentation/ocean circulation/Southeastern U.S./Eastern U.S.; United States/Cape Fear Terrace/marine terraces/bottom features; outer shelf/seismic stratigraphy/bathymetry/paleo-oceanography; deltaic sedimentation/erosion/paleocirculation/Gulf Stream/ocean currents/paleocurrents/North America/North American Atlantic/North Atlantic/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/24 (SURFICIAL GEOLOGY,QUATERNARY GEOLOGY)

Multichannel seismic-reflection collected in 1976 off of the Washington-Oregon coast.
McClellan, P. H.; P. D., Jr Snavely. U. S. Geol. Surv., USA.
Open-File Report (United States Geological Survey. 1978) OF 87-0607, 3 21 sheet, 1987.

Descriptors: *Washington/*Oregon/*Pacific Ocean/oceanography/geophysical surveys/continental shelf/seismic surveys/USGS/Pacific Coast/Western U.S; United States/North American Pacific/reflection methods; multichannel methods/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Multichannel seismic-reflection profiles collected in 1980 off of the Washington and northern Oregon coast.
McClellan, P. H.; P. D., Jr Snavely. U. S. Geol. Surv., USA.
Open-File Report (United States Geological Survey. 1978) OF 88-0205, 3 21 sheet, 1988.

Descriptors: *Washington/*Oregon/*Pacific Ocean/oceanography/geophysical surveys/continental margin/seismic surveys/maps/USGS/Pacific Coast; Western U.S./United States/North American Pacific/seismic profile; reflection methods/multichannel methods/site location maps/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Multichannel seismic-reflection profiles collected in 1977 off the Northern California and Oregon coast.
McCulloch, D. S.; D. M. Mann; H. F. Ryan, et. al. U. S. Geol. Surv., Menlo Park, CA, USA.
Open-File Report (United States Geological Survey. 1978) OF 86-0406, 4 21 sheet, 1986.

Descriptors: *California/*Oregon/*Pacific Ocean/oceanography/geophysical surveys/continental margin/seismic surveys/maps/USGS/Pacific Coast; Western U.S./United States/Northern California/seismic survey map; site location maps/seismic profiles/multichannel methods; reflection methods/North American Pacific/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Multichannel seismic-reflection profiles collected in 1979, between latitudes 34 degrees 15' and 36 degrees 30' north, off the California coast from Pt. Conception to Point Sur
McCulloch, D. S.; D. M. Mann; R. Sliter, et. al. U. S. Geol. Surv., USA.
Open-File Report (United States Geological Survey. 1978) OF 88-0224, 3 21 sheet, 1988.

Descriptors: *California/*Pacific Ocean/oceanography/geophysical surveys/continental margin/seismic surveys/maps/USGS/Pacific Coast; Western U.S./United States/site location maps/North American Pacific/seismic profiles/reflection methods/multichannel methods/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Multichannel seismic-reflection profiles collected in 1975, between latitudes 34 degrees and 38 degrees North, off the California coast from Pt. Conception to Pt. Reyes.
McCulloch, D. S.; P. H. McClellan. U. S. Geol. Surv., USA.
Open-File Report (United States Geological Survey. 1978) OF 88-0214, 4 21 sheet, 1988.

Descriptors: *California/*Pacific Ocean/oceanography/geophysical surveys/continental margin/maps/seismic surveys/USGS/site location maps; Point Conception/Santa Barbara County California/Pacific Coast; Western U.S./United States/Point Reyes/North

American Pacific; reflection methods/data processing/data acquisition/seismic profiles/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Role of submarine canyons in shaping the rise between Lydonia and Oceanographer canyons, Georges Bank.
McGregor, B. A. U. S. Geol. Surv., Reston, VA, USA.
Marine Geology 62: 3-4, 277-293, 1985.

Descriptors: *New England/*Atlantic Ocean/oceanography/geophysical surveys/continental margin/continental slope/seismic surveys/North American Atlantic/Lydonia Canyon/Oceanographer Canyon/submarine canyons; continental shelf/channels/morphology/continental rise/United States/reflection methods/seismic methods/geophysical profiles/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Diversity of processes and morphology on the U.S. Atlantic continental slope and rise Conference on Continental margin mass wasting and Pleistocene sea-level changes. Woods Hole, MA, United States, Aug. 13-15, 1980.
McGregor, B. A.; D. W.(EDITOR) Folger; J. C.(EDITOR) Hathaway. U. S. Geol. Surv., Miami, FL, USA; U. S. Geol. Surv., USA.
Geological Survey Circular, C-0961, 21-35, 1987.

Descriptors: *Atlantic Ocean/*Virginia/*North Carolina/*Maryland/*Delaware/*New Jersey/geophysical surveys/oceanography/seismic surveys/continental margin/USGS/North American Atlantic; North Atlantic/continental slope/continental rise/bottom feature; submarine canyons/Lindenkohl Canyon/Wilmington Canyon/Baltimore Canyon/Southeastern U.S./Eastern U.S./United States/seismic profiles/deep-sea sedimentation/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Mapping and research in the Exclusive Economic Zone.
McGregor, B. A.; M. Lockwood. NOAA, USA; U. S. Geol. Surv., USA, 40p., 1985.

Descriptors: *United States/*Pacific Ocean/*Atlantic Ocean/*survey organizations *associations/*Bering Sea/economic geology/oceanography/current research/mineral resources/ocean floors/fuel resources/polymetallic ores/U. S. Geological Survey/NOAA/USGS/maps/cartography/Exclusive Economic Zone/popular geology/elementary geology/nodules/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

GLORIA sidescan-sonar survey of the western Mississippi Fan intraslope basins USGS research on energy resources, 1986; program and abstracts.
McGregor, B. A.;J. S. Schlee;K. D. Klitgord, et al. U. S. Geol. Surv., USA.
Geological Survey Circular, C-0974, 39, 1986.

Descriptors: *Louisiana/*Gulf of Mexico/oceanography/geophysical surveys/continental slope/acoustical surveys/USGS/Gulf Coastal Plain; GLORIA/sonar methods/side-scanning methods/submarine fans; Mississippi Fan/United States Exclusive Economic Zone/continental rise/sedimentary basins/fuel resources/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Interpretation of seafloor processes in the Gulf of Mexico using the GLORIA sidescan sonar system USGS research on energy resources, 1988; program and abstracts. Denver, CO, United States, Feb. 29-Mar. 2, 1988.
McGregor, B. A.; D. C. Twichell; L. M.(EDITOR) Carter. U. S. Geol. Surv., USA
Geological Survey Circular, C-1025, 35, 1988.

Descriptors: *Gulf of Mexico/oceanography/ocean floors/USGS/North American Atlantic/North Atlantic/Atlantic Ocean/GLORIA/sonar methods/side-scanning methods/continental slop; continental rise/United States Exclusive Economic Zone/fuel resources/salt tectonics/bottom features/marine sedimentation; acoustical surveys/geophysical surveys/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

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McMaster, R. L.; S. D. Locker; E. P. Laine. Univ. R.I., Grad. Sch. Oceanogr., Kingston, RI, USA; Bowdoin Coll., USA.
Marine Geology 87: 2-4, 137-163, 1989.

Descriptors: *Eastern U.S./*Atlantic Ocean/*paleogeography/*sediments; *sedimentation/oceanography/geophysical surveys/Neogene/marine sediments; processes/continental margin/seismic surveys/environmental analysis/deep-sea sedimentation/North American Atlantic/North Atlantic/Georges Bank; Blake Plateau/Northwest Atlantic/Oligocene/Paleogene/Tertiary; continental rise/United States/uplifts/seismic stratigraphy; submarine fans/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)/12 (STRATIGRAPHY/HISTORICAL GEOLOGY)

Comparison of sonographs taken before and after Hurricane Diana, Onslow Bay, North Carolina.
Mearns, D. L.; A. C. Hine; S. R. Riggs. Univ. South Fla., Dep. Mar. Sci., St. Petersburg, FL, USA; East Carol. Univ., USA.
Geology (Boulder) 16: 3, 267-270, 1988.

Descriptors: *North Carolina/*Atlantic Ocean/*sedimentation/oceanography/geophysical surveys/transport/continental shelf/acoustical surveys/marine transport/Southeastern U.S./Eastern U.S./United States/Onslow Bay/Hurricane Diana; sonographs/sonar methods/high-resolution methods/side-scanning methods/storms/North American Atlantic/North Atlantic/southeastern North Carolina/Atlantic Coastal Plain/North America/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Deep structure of the Atlantic continental margin, Long Island Platform to Blake Plateau, U. S. A Geological Society of America, 99th annual meeting. San Antonio, TX, United States, Nov. 10-13, 1986.
Milici, R. C.; K. C. Bayer. Va. Div. Miner. Resour., Charlottesville, VA, USA; U. S. Geol. Surv., USA.
Abstracts with Programs - Geological Society of America 18: 6, 695, 1986.

Descriptors: *Eastern U.S/oceanography/continental margin/Atlantic Ocean/Long Island Platform/Blake Plateau/Northwest Atlantic/United States/basement/geophysical surveys/seismic surveys/Cape Hatteras North Carolina/crust/normal faults/faults/extension/reflection/fracture zones/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

The origin of the Pennsylvania Salient and CDP seismic imaging of the Cornwall-Kelvin displacement along the U.S. Atlantic continental margin; Appalachian Basin symposium; program and extended abstracts. Reston, VA, United States, Nov. 9, 1988.
Milici, R. C.; K. C. Bayer; A. P.(COMPILER) Schultz. Va. Div. Miner. Resour., Charlottesville, VA, USA; U. S. Geol. Surv., USA.
Open-File Report (United States Geological Survey. 1978) OF-0585, 19, 1988.

Descriptors: *New York/*Pennsylvania/*Appalachians/*Atlantic Ocean/*Eastern U.S/structural geology/geophysical surveys/oceanography/tectonics/seismic surveys/continental margin/USGS/Appalachian Basin/sedimentary basins/North America/United States/Pennsylvania Salient/Cornwall New York/Kelvin Seamounts/Orange County New York; southeastern New York/Cornwall-Kelvin displacement/shear zones; common-depth-point method/North American Atlantic/North Atlantic/16 (STRUCTURAL GEOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Middle to late Miocene canyon cutting on the New Jersey continental slope; biostratigraphic and seismic stratigraphic evidence.
Miller, K. G.; A. J. Melillo; G. S. Mountain, et. al. Lamont-Doherty Geol. Obs., Palisades, NY, USA; Rutgers Univ., USA; Exxon Prod. Res., USA; U. S. Geol. Surv., USA.
Geology (Boulder) 15: 6, 509-512, 1987.

Descriptors:*NewJersey/*AtlanticOcean/*foraminifers/*algalflora/oceanography/stratigraphy/geophysicalsurveys/biostratigraphy; nannofossils/continental slope/changes of level/Miocene/seismic surveys/Eastern U.S./United States/Neogene/Tertiary/seismic stratigraphy; submarine canyons/upper Miocene/middle Miocene/erosion surfaces; erosional unconformities/boundary/microfossils/planktonic taxa; algae/discoasters/North American Atlantic/North Atlantic/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/12 (STRATIGRAPHY/HISTORICAL GEOLOGY)/20 (GEOPHYSICS/APPLIED)

A method of obtaining a velocity-depth envelope from wide-angle seismic data. (Delaware, New Jersey, Baltimore Canyon, Atlantic Coastal Plain)
Mithal, R.; J. B. Diebold. Lamont-Doherty Geol. Obs., Palisades, NY, USA.
The Geophysical Journal of the Royal Astronomical Society 89: 3, 965-985, 1987.

Descriptors: *Delaware/*seismology/*New Jersey/crust/oceanography/velocity structure/continental shelf/Baltimore Canyon/Atlantic Coastal Plain/United States/North America/Eastern U.S./seismic surveys/geophysical surveys/inverse problem/traveltime/18 (GEOPHYSICS/SOLID EARTH)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Bathymetric map of the Alsek sediment instability area, northeastern Gulf of Alaska
Molnia, B. F.; M. P. Bingham; M. L. Rappeport. U. S. Geol. Surv., USA.
Miscellaneous Investigations Series - U.S. Geological Survey I-1364, 1 sheet, 1985.

Descriptors: *Alaska/*Pacific Ocean/oceanography/engineering geology/continental margin/maps/geologic hazards/slope stability/USGS; United States/Gulf of Alaska/bathymetric maps/22 (ENGINEERING & ENVIRONMENTAL GEOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Middle Miocene oceanographic event in the eastern Gulf of Mexico; implications for seismic stratigraphic succession and Loop Current/Gulf Stream circulation.
Mullins, H. T.; A. F. Gardulski; S. W., Jr. Wise, et. al. Syracuse Univ., Dep. Geol., Syracuse, NY, USA; Fla. State Univ., USA.
Geological Society of America Bulletin 98: 6, 702-713, 1987.

Descriptors: *Gulf of Mexico/*Atlantic Ocean/*Gulf Coastal Plain/*Florida; *sedimentation/*sediments/oceanography/stratigraphy/geophysical surveys/processes/marine sediments/ocean circulation/Miocene/seismic surveys/changes of level; continental margin/marine sedimentation/environmental analysis; North American Atlantic/North Atlantic/eastern Gulf of Mexico/Loop Current/Gulf Stream/paleocirculation/paleo-oceanography/Neogene; Tertiary/middle Miocene/seismic stratigraphy/North America/core; seismic profiles/unconformities/Southeastern U.S./Eastern U.S.; United States/carbonate sediments/slope environment/shelf environment/reflection methods/12 (STRATIGRAPHY/HISTORICAL GEOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Tectonic and eustatic controls of late Quaternary shelf sedimentation along the Central California (Santa Cruz) continental margin; high-resolution seismic stratigraphic evidence.
Mullins, H. T.; D. K. Nagel; L. L. Dominguez. Syracuse Univ., Dep. Geol., Heroy Geol. Lab., Syracuse, NY, USA; San Jose State Univ., USA.
Sedimentary Geology 44: 3-4, 327-347, 1985.

Descriptors:*California/*sedimentation/*faults/oceanography/stratigraphy/environment/displacements/geophysical surveys/continental margin/Quaternary/strike-slip faults/changes of level; seismic surveys/Central California/Santa Cruz/upper Quaternary; Cenozoic/United States/tectonics/vertical movements/processes; eustacy/high-resolution methods/San Gregorio fault zone/Pigeon Point Basement High/Monterey/San Francisco/Ano Nuevo/terraces/24 (SURFICIAL GEOLOGY,QUATERNARY GEOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

The modern carbonate ramp slope of central West Florida.
Mullins, H. T.; A. F. Gardulski; E. J. Hinchey, et. al. Syracuse Univ., Dep. Geol., Heroy Geol. Lab., Syracuse, NY, USA; Univ. South Fla., USA.
Journal of Sedimentary Petrology 58: 2, 273-290, 1988.

Descriptors: *Florida/*sedimentation/oceanography/geophysical surveys/environment/continental margin/seismic surveys/carbonate platforms/western Florida/Southeastern U.S./Eastern U.S./United States/Holocene; Quaternary/reflection/Loop Current/lithofacies/grain size; distribution/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Three-dimensional sedimentary framework of the carbonate ramp slope of central West Florida; a sequential seismic stratigraphic perspective.
Mullins, H. T.; A. F. Gardulski; A. C. Hine, et. al. Syracuse Univ., Dep. Geol., Syracuse, NY, USA; Univ. South Fla., USA; Chevron USA, USA; Fla. State Univ., USA.

Geological Society of America Bulletin 100: 4, 514-533, 1988.

Descriptors: *Florida/*Gulf of Mexico/*sedimentation/*paleogeography/*sediments/oceanography/geophysical surveys/stratigraphy/Neogene/processes; marine sediments/continental slope/seismic surveys/marine sedimentation; environmental analysis/Southeastern U.S./Eastern U.S./United States/North American Atlantic/North Atlantic/Atlantic Ocean; carbonate ramps/three-dimensionalmodels/models/seismicstratigraphy/UpperCretaceous/Cretaceous/MiddleCretaceous/seismicprofiles/tectonic controls/bottom features/cores/isopach maps; maps/Tertiary/paleo-oceanography/carbonate sediments/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Outer Continental Shelf Environmental Assessment Program. Final reports of principal investigators. Volume 48.
National Oceanic & Atmospheric Administration. U.S. Dept. of Commerce.National Ocean Serv., Anchorage, AK (USA) 529 p., 1986.

Abstract: The following topics are considered: the geotechnical framework study of the Kodiak Shelf, Alaska and the geotechnical framework, northeast Gulf of Alaska. (See also PB87-194973, PB87-197497 and PB87-197505.).

Outer Continental Shelf Environmental Assessment Program. Final reports of principal investigators. Volume 51.
National Oceanic and Atmospheric Administration.National Ocean Serv., Anchorage, AK (USA)787p., 1986.

Abstract: Research to determine the accumulation of organic constituents and heavy metals from petroleum-impacted sediments by marine detritivores of the Alaskan outer continental shelf Suspended particulate matter distribution, transport, and physical characteristics in the north Aleutian Shelf and St. George Basin lease areas The production and dispersion of dissolved methane in southeastern Bering Sea Oil spill vulnerability, coastal morphology, and sedimentation of outer Kenai Peninsula and Montague Island Circulation and water masses in the Gulf of Alaska Coastal oceanography of the northeastern Gulf of Alaska.

Maps showing the Quaternary geology of east-central Long Island Sound.
Needell, S. W.; R. S. Lewis; S. M. Colman. Conn. Geol. and Nat. Hist. Surv., USAU. S. Geol. Surv., USA.
Miscellaneous Field Studies Map (United States Geological Survey) MF-1939-B, 6, 23 sheets, 1987.

Descriptors: *AtlanticOcean/*Connecticut/*New York/stratigraphy/oceanography/Quaternary/maps/continentalmargin/USGS/Long Island Sound/New England/Eastern U.S./United States/explanatory text/24 (SURFICIAL GEOLOGY,QUATERNARY GEOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Neotectonics and basin development at a continental/island arc transition in the western Alaska Peninsula shelf. The Geological Society of America, 98th annual meeting. Orlando, FL, United States, Oct. 28-31, 1985.
Newcomb, K. R. Lamont-Doherty Geol. Obs.. Sci., Palisades, NY, USA.
Abstracts with Programs - Geological Society of America 17: 7, 676, 1985.

Descriptors: *Alaska/structural geology/neotectonics/Western U.S./United States/Alaska Peninsula/island arcs/continental shelf/Aleutian Islands/compression/reverse fault; faults/folds/normal faults/Kodiak Island/Chirikov Island/Semidi Island/extension/transverse faults/Sanak Basin/East Sanak Basin; evolution/subsidence/bathymetry/gravity anomalies/Beringia/16 (STRUCTURAL GEOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

OTEC project area survey. Houston, United States, May 6-9, 1985.
Niedoroda, A. W.; J. R. Pittman; T. A. Philpot, et. al. R. J. Brown & Assoc. Amer., USA.
Proceedings - Offshore Technology Conference 17, Vol. 2, 87-95, 1985.

Descriptors: *Hawaii/oceanography/ocean floors/OTEC/offshore/Oahu/Sea MARC II/Kahe Point; continental shelf/bathymetry/bottom features/Pacific Ocean/United States/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Workshop 2; Scientific mapping and research to characterize the EEZ; West Coast.
Normark, W. R.(chairperson);D. A.(chairperson) Hull. U. S. Geol. Surv., Menlo Park, CA, USA; Oreg. Dep. Geol. and Miner. Ind., USA
Geological Survey Circular, C-1018, 59-64, 1988.

Descriptors: *Pacific Ocean/*Pacific Coast/economic geology/oceanography/mineral resources/ocean floors/continental margin/USGS/North American Pacific/Western U.S./United States/cartography/United States Exclusive Economic Zone/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Preliminary cruise report, Hawaiian GLORIA Leg 2, P6-86-HW, November 1986.
Normark, W. R.;P. W. Lipman;J. B. Wilson, et al. Inst. Oceanogr. Sci., GBR; U. S. Geol. Surv., Menlo Park, CA, USA
Open-File Report (United States Geological Survey. 1978) OF 87-0298, 42, 1987.

Descriptors: *Pacific Ocean/*Hawaii/oceanography/geophysical surveys/ocean floors/acoustical surveys/USGS/United States Exclusive Economic Zone/North Pacific/Hawaiian Ridge/GLORIA/sonar methods; side-scanning methods/bottom features/mid-ocean ridges/East Pacific Ocean Islands/Polynesia/United States/offshore/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Maps showing geology, shallow structure, and bedform morphology of Nantucket Sound, Massachusetts.
O'Hara, C. J.; R. N. Oldale. U. S. Geol. Surv., USA.
Miscellaneous Field Studies Map (United States Geological Survey) MF-1911, 4 sheets, 1987.

Descriptors: *Massachusetts/*Atlantic Ocean/oceanography/continental shelf/maps/marine geology/USGS/New England/Eastern U.S./United States/North American Atlantic/North Atlantic/marine geology maps/bedforms/bottom features/morphology/structural map/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Style and origin of mass movement along the New England continental slope. The Geological Society of America, 98th annual meeting. Orlando, FL, United States, Oct. 28-31, 1985.
O'Leary, D. W. U. S. Geol. Surv., Woods Hole, MA, USA.

Abstracts with Programs - Geological Society of America 17: 7, 681, 1985.

Descriptors: *New England/*geomorphology/oceanography/massmovements/continentalslope/slumping/Eastern U.S./UnitedStates/relief; acoustical surveys/geophysical surveys/Neogene/Tertiary; sedimentation/seismic surveys/Grand Banks earthquake 1929/creep/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Shallow stratigraphy of the New England continental margin.
O'Leary, D. W. U. S. Geol. Surv., USA.
Geological Survey Bulletin (Washington) B-1767, 40, 1988.

Descriptors: *New England/*Massachusetts/*Atlantic Ocean/*sediments; *sedimentation/*paleogeography/*sedimentary rocks/oceanography/geophysical surveys/stratigraphy/Cenozoic/marine sediments/lithostratigraphy/cyclic processes/continental margin/seismic surveys/marine sedimentation/Tertiary; USGS/Eastern U.S./United States/Rhode Island/North American Atlantic/North Atlantic/seismic profiles/reflection methods; high-resolution methods/correlation/provenance/erosional unconformities/Upper Cretaceous/Cretaceous/shallow-water environment/changes of level/regression/transgression/uplifts; paleoclimatology/bibliography/12 (STRATIGRAPHY/HISTORICAL GEOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Morphogenesis of the New England continental slope and rise in light of GLORIA sidescan sonar image mosaics. SEPM annual midyear meeting. Austin, TX, United States, Aug. 20-23, 1987.
O'Leary, D. W. U. S. Geol. Surv., Woods Hole, MA, USA.
Abstracts - Society of Economic Paleontologists and Mineralogists, Annual Midyear Meeting 4, 62, 1987.

Descriptors: *New England/oceanography/continental slope/continental rise/Eastern U.S./United States; sonar methods/Neogene/Tertiary/Atlantic Ocean/North American Atlantic/North Atlantic/bathymetry/side-scanning methods; acoustical surveys/geophysical surveys/GLORIA/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Sedimentary patterns associated with ridge and swale bathymetry, Virginian shelf, U.S.A Shelf sedimentation, shelf sequences and related hydrocarbon accumulation. Annual Research Conference. Gulf Coast Section. Society of Economic Paleontologists and Mineralogists. . Corpus Christi, TX, United States, Dec. 7-10, 1986.
Oertel, G. F.; C. L.(chairperson) McNulty; S. J. Conger(chairperson) Morris. Old Dom. Univ., Dep. Oceanogr., Norfolk, VA, USA; Morris Geol. Enterp., USA; Program and Abstracts 7, 25, 1986.

Descriptors: *Virginia/*Atlantic Ocean/oceanography/sedimentation/Southeastern U.S./Eastern U.S./United States; Atlantic Coastal Plain/North America/bathymetry/continental shel; data processing/three-dimensional models/models/zoning/Chesapeake Bay/relief/cores/topography/grain size/sedimentary structures; lithosomes/X-ray data/textures/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

A drowned Holocene barrier spit off Cape Ann, Massachusetts.
Oldale, R. N. U. S. Geol. Surv., Woods Hole, MA, USA.
Geology (Boulder) 13: 5, 375-377, 1985.

Descriptors: *Massachusetts/*Atlantic Ocean/geomorphology/oceanography/geophysical surveys/changes of level/continental shelf/seismic surveys/Essex County; United States/Cape Ann/offshore/Jeffreys Ledge/North American Atlantic/lower Holocene/Holocene/Quaternary/geophysical profile; reflection methods/seismic methods/spits/longshore bars/bottom features/bathymetry/barrier spits/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/24 (SURFICIAL GEOLOGY,QUATERNARY GEOLOGY)

Maps and seismic profiles showing geology of the inner continental shelf, Massachusetts Bay, Massachusetts.
Oldale, R. N.; J. Bick. U. S. Geol. Surv., USA.
Miscellaneous Field Studies Map (United States Geological Survey) MF-1923, 4 sheets, 1987.

Descriptors: *Massachusetts/*Atlantic Ocean/oceanography/geophysical surveys/continental shelf/maps/seismic surveys/USGS/New England/Eastern U.S./United States/inner shelf/seismic profiles/seismic survey maps/North American Atlantic/North Atlantic/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Maps and seismic profiles showing geology of the inner continental shelf, Cape Ann, Massachusetts to New Hampshire.
Oldale, R. N.; L. E. Wommack. U. S. Geol. Surv., USA.
U. S. Geol. Surv., Misc. Field Stud. Map MF-1892, 2 sheets, 1986.

Descriptors: *Massachusetts/*New Hampshire/*Atlantic Ocean/oceanography/geophysical surveys/continental shelf/maps/seismic surveys/Essex County/Rockingham County/USGS/New England/Eastern U.S./United States/northeastern Massachusetts/southeastern New Hampshire/inner shelf/seismic profiles/North American Atlantic/North Atlantic/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Mapping the Exclusive Zone. Oceans '85 "Engineering and the Environment" San Diego, CA (USA) 12-14 Nov 1985.
Perry, R. B. NOAA, Natl. Ocean Serv., 6001 Executive Blvd., Rockville, MD 20852, USA
OCEANS '85, vol. 2, pp. 1190-1195, 1985.

Abstract: The NOAA multibeam surveys of the Exclusive Economic Zone (EEZ) are providing a new data base and map series that are significantly superior to existing bathymetric maps compiled from prior surveys, particularly in areas of complex relief. The new Sea Beam and Bathmetric Swath Survey System (BSSS) surveys are designed to give essentially 100 percent coverage of selected areas on the continental shelf, slope, and upper rise off the west coast of the U.S. These areas were selected through a cooperative agreement between NOAA and the Department of Interior's U.S. Geological Survey (USGS).

Multi-beam surveys of the U.S. Exclusive Economic Zone. 1. Biennial Canadian Hydrographic Conference. Hydrography and Technology in the Mid - 80's (How Well Are They Working Together?) Halifax, N.S. (Canada) 16- 18 Apr 1985.
Perry, R. B. NOAA, Natl. Ocean Serv., 6001 Executive Blvd., Rockville, MD 20852, US App. 53-57, 1986.

Abstract: The NOAA National Ocean Service has begun a long-range program to map selected portions of the U.S. Exclusive Economic

Zone (EEZ). New surveys will utilize the Bathymetric Swath Survey System (BS super(3)) on the NOAA Ship Davidson) out to 600 meters depth, as well as the Sea Beam system on the NOAA Ship Surveyor in waters over 600 meters depth. These multi-beam systems map a swath of the sea floor, with the BS super(3) covering up to 1/2 times and the Sea Beam) up to 75% of the water depth. The first EEZ surveys began in 1984 off the northern California coast to the south and are now being extended to areas off Oregon. Survey coverage extends from 150 meters depth out to approximately 3,500 meters depth. This new mapping program is conducted in cooperation with the U.S. Geological Survey, with priorities and funding set through joint discussions. Present plans are to continue work in the West Coast EEZ to cover the outermost continental shelf, slope, and upper rise, with an expansion of the program to other areas as multi-beam system and ship time become available.

Geologic map of the ocean floor off Oregon and the adjacent continental margin.
Peterson, C. P.; L. D. Kulm; J. J. Gray.
Geological Map Series (Portland) 421 sheet, 1986.

Descriptors: *Oregon/*Pacific Ocean/oceanography/maps/continental margin/Pacific Coast/Western U.S./United State; marine geology maps/geologic maps/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Buried structures at the northern end of the early Mesozoic South Georgia Basin, South Carolina, as interpreted from aeromagnetic data. Studies of the early Mesozoic basins of the Eastern United States. Reston, VA, United States, May 11-14, 1987
Phillips, J. D.; A. J.(EDITOR) Froelich; G. R., Jr.(EDITOR) Robinson. U. S. Geol. Surv., USA; U. S. Geol. Surv., USA.
Geological Survey Bulletin (Washington). B-1776, 248-252, 1988.

Descriptors: *South Carolina/*faults/*Atlantic Ocean/oceanography/distribution/geophysical surveys/continental shelf/magnetic anomalies/magnetic surveys/Orangeburg County South Carolina County/Calhoun County South Carolina County; Clarendon County South Carolina County/Williamsburg County South Carolina County/Georgetown County South Carolina County/Berkeley County South Carolina County/Charleston County South Carolina County; Dorchester County South Carolina County/Colleton County South Carolina County/Beaufort County South Carolina County/Jasper County South Carolina County/Ham/16 (STRUCTURAL GEOLOGY)/20 (GEOPHYSICS/APPLIED)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Geologic investigations in the Chukchi Sea, 1984, NOAA ship Surveyor cruise.
Phillips, R. L.; P. W. Barnes; R. E. Hunter, et. al. U. S. Geol. Surv., Menlo Park, CA, USA.
Open-File Report (United States Geological Survey. 1978) OF-88-0025, 82, 1988.

Descriptors: *Arctic Ocean/*Alaska/*sediments/geophysical surveys/oceanography/marine sediments/seismic surveys/continental shelf/lithofacies/USGS/Chukchi Sea; Western U.S./United States/ocean floors/bottom features; bathymetry/acoustical surveys/ice gouging/gravel deposits/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

A seismic cross section of the New England Appalachians; the orogen exposed Reflection seismology; the continental crust. Ithaca, NY, United States, Ju 26-28, 1984.
Phinney, R. A.; M. E. Barazangi; L. D.(EDITOR) Brown. Princeton Univ., Dep. Geol. and Geophys. Sci., Princeton, NJ, USA; Cornell Univ., Inst. Stud. Cont., Ithaca, NY, USA.
Geodynamics Series 14, 157-172, 1986.

Descriptors:*Appalachians/*AtlanticOcean/*NewEngland/*EasternU.S/tectonophysics/geophysicalsurveys/oceanography/crust/seismic surveys/continental margin/continental crust/deep seismic sounding/reflection methods/Long Island Platform/North America/United States/accretion/southern New England/North American Atlantic/North Atlantic/orogenic belts/Paleozoic/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/18 (GEOPHYSICS/SOLID EARTH)

Late Cretaceous and Cenozoic evolution of the New Jersey continental slope and upper rise; an integration of borehole data with seismic reflection profiles. Initial reports of the Deep Sea Drilling Project covering Leg 95 of the cruises of the drilling vessel Glomar Challenger, St. John's, Newfoundland, to Ft. Lauderdale, Florida, August-September 1983
Poag, C. W.; G. S. Mountain; C. W. Poag, et. al. U. S. Geol. Surv., Woods Hole, MA, USA; Lamont-Doherty Geol. Obs., USA Univ. Pierre et Marie Curie, FRA; Plymouth Polytech., GBR; Univ. Tokyo, JPN; Princeton Univ., USA; Scripps Inst. Oceanogr., USA; City Univ., N.Y., USA; Woods Hole Oceanogr. Inst., USA; Univ. Bonn, DEU; Mass. Inst. Technol., USA; Lamont-Doherty Geol. Obs., USA; U. S. Geol. Surv., Woods Hole, MA, USA.
Initial Reports of the Deep Sea Drilling Project 95, 673-724, 1987.

Descriptors: *New Jersey/geophysical surveys/oceanography/stratigraphy/seismic surveys/continental margin/Cenozoic/Cretaceous/Upper Cretaceous/evolution/Eastern U.S./United States/continental slop; continental rise/boreholes/geophysical profiles/multichannel methods/DSDP Site 612/DSDP Site 605/DSDP Site 604/DSDP Site 613|613/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)/12 (STRATIGRAPHY/HISTORICAL GEOLOGY)

The New Jersey Transect; stratigraphic framework and depositional history of a sediment-rich passive margin. Initial reports of the Deep Sea Drilling Project covering Leg 95 of the cruises of the drilling vessel Glomar Challenger, St. John's, Newfoundland, to Ft. Lauderdale, Florida, August-September 1983.
Poag, C. W.; C. W. Poag; A. B. Watts, et. al. U. S. Geol. Surv., Woods Hole, MA, USA; Lamont-Doherty Geol. Obs., USA Univ. Pierre et Marie Curie, FRA; Plymouth Polytech., GBR; Univ. Tokyo, JPN; Princeton Univ., USA; Scripps Inst. Oceanogr., USA; City Univ., N.Y., USA; Woods Hole Oceanogr. Inst., USA; Univ. Bonn, DEU; Mass. Inst. Technol., USA; U. S. Geol. Surv., Woods Hole, MA, USA.
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Stratigraphy and depositional sequences of the U.S. Atlantic shelf and slope The Geological Society of America, 98th annual meeting. Orlando, FL, United States, Oct. 28-31, 1985.
Poag, C. W.; P. C. Valentine. U. S. Geol. Surv., Woods Hole, MA, USA.

Abstracts with Programs - Geological Society of America 17: 7,691, 1985.

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Cenozoic unconformities and depositional supersequences of North Atlantic continental margins; testing the Vail model.
Poag, C. W.; L. W. Ward. U. S. Geol. Surv., Woods Hole, MA, USA.
Geology (Boulder) 15: 2, 159-162, 1987.

Descriptors: *Atlantic Ocean/*Eastern U.S./*Ireland/*Atlantic Coastal Plain; *sedimentation/*foraminifers/stratigraphy/oceanography/cyclic processes/biostratigraphy/Cenozoic/continental margin/changes of level/marine sedimentation; North American Atlantic/North Atlantic/European Atlantic; unconformities/cores/seismic surveys/geophysical surveys; paleo-oceanography/Vail model/models/seismic stratigraphy; transgression/regression/United States/North America/Western Europe/Europe/depth indicators/microfossils/12 (STRATIGRAPHY/HISTORICAL GEOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

A summary of environmental geologic studies on the southeastern United States Atlantic outer continental shelf, 1979-1982.
Popenoe, P. U. S. Geol. Surv., Woods Hole, MA, USA.
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Descriptors: *Eastern U.S./*Atlantic Coastal Plain/*Atlantic Ocean/oceanography/environmental geology/geophysical surveys/continental shelf/geologic hazards/surveys/USGS/North American Atlantic/programs/current research/outer shelf/22 (ENGINEERING & ENVIRONMENTAL GEOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Isopach and structure contour maps of the Miocene and post-Miocene sediments in the Southeast Georgia Embayment, Florida-Hatteras Shelf, offshore Georgia. Popenoe, P.; J. S. Spalding. Zellars-Williams Co., USA; U. S. Geol. Surv., Woods Hole, MA, USA.
Open-File Report (United States Geological Survey. 1978) OF 88-0397, 12, 1988.

Descriptors: *Georgia/*Atlantic Ocean/*sediments/oceanography/geophysical surveys/marine sediments/stratigraphy/continental shelf/seismic surveys/maps/distribution/Neogene; Quaternary/USGS/Southeastern U.S./Eastern U.S./United States; Florida-Hatteras Shelf/Southeast Georgia Embayment/North American Atlantic/North Atlantic/Tertiary/isopach maps/structure contour maps/reflection methods/seismic stratigraphy/phosphate deposits; heavy mineral deposits/seismic profiles/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)/24 (SURFICIAL GEOLOGY,QUATERNARY GEOLOGY)

Characterization of sediments from the base and top of the West Florida Escarpment.
Poppe, L. J.; R. F. Commeau; J. A. Commeau. U. S. Geol. Surv., Woods Hole, MA, USA.
Open-File Report (United States Geological Survey. 1978) OF 87-0196, 22, 1987.

Descriptors: *Gulf of Mexico/*sediments/*Florida/*sedimentation/oceanography/marine sediments/processes/petrography/continental margin/marine sedimentation/USGS/North American Atlantic/North Atlantic/Atlantic Ocean/West Florida Escarpment/scarps/textures/provenance/SEM data/ooze/clastic sediments/calcarenite/limestone/carbonate rocks/inner slope; continental slope/continental shelf/Southeastern U.S./Eastern U.S; United States/pelagic sedimentation/bioturbation/biogenic structures/sedimentary structures/erosion/seismic surveys; geophysical surveys/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Reconnaissance geochronology of Cretaceous seamounts in the Hawaiian Exclusive Economic Zone AGU 1985 fall meeting.
Pringle, M. S. U. S. Geol. Surv., Menlo Park, CA, USA
Eos, Transactions, American Geophysical Union 66: 46,1083, 1985.

Descriptors: *Pacific Ocean/oceanography/geochronology/ocean floors/Cretaceous/Cenozoic/United States Exclusive Economic Zone/Hawaii/East Pacific Ocean Islands/Polynesia/United States; seamounts/hot spots/volcanism/absolute age/K/Ar/Ar/Ar/basalt; volcanic rocks/Necker Island/spreading centers/hydrothermal conditions/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/03 (GEOCHRONOLOGY)

The Currituck slide, Mid-Atlantic continental slope -- revisited.
Prior, D. B.;E. H. Doyle;T. Neurauter. Coast. Stud. Inst., Louisiana State Univ., Baton Rouge, LA 70803, USA
MAR. GEOL, vol. 73, no. 1-2, pp. 25-45, (1986).

Abstract: High-resolution survey data, including deep-tow side-scan sonar and sub-bottom profiles, have been acquired over part of a slide complex, first described by Bunn and McGregor (1980), on the continental slope northeast of Cape Hatteras (Currituck Sound). The data permit further consideration of slide geometry, sediments, ages and origins. The slide complex is the result of two slides, one within another. The slides have basal shear surfaces inclined at 4 degree and 2 degree , close to the regional dips of the underlying strata (3 degree). The total volume of sediment in the slides is at least 128 km super(3), and the entire slide complex is mantled by surface sediment 4-9 m thick. The slides are late Pleistocene in age and are perhaps associated with rapid deposition around the ancestral James and Roanoke river delta, located on the outer shelf and upper slope during a period of lowered sea level.

Intra-slope canyon morphology and its modification by rockfall processes, U.S. Atlantic continental margin.
Prior, D. B.;E. H. Doyle. Coast. Stud. Inst., Lousiana State Univ., Baton Rouge, LA 70803, USA
MAR. GEOL, vol. 67, no. 1-2, pp. 177-196, 1985.

Abstract: Side-scan sonar data have been acquired at three different range settings and scales for a section of the continental slope. Both regional context and site-specific details are provided. Intra-slope canyons on the lower slope are associated with outcrops of Middle Eocene carbonate rocks. Drop core analyses of surface sediments suggest that intra-slope canyon formation is not a geologically recent event, but occurred before 50,000 yrs B.P. Within the canyons, rocky debris results from episodic rockfall activity from the steep canyon walls. Dating of canyon floor sediments with inclusions of rockfall debris at one location

suggests the last discrete period of rockfall there began about 10,000 yrs B.P. and ended about 6000 yrs ago.

Evidence for sediment eruption on deep sea floor, Gulf of Mexico.
Prior, D. B.; E. H. Doyle; M. J. Kaluza. La. State Univ., Coastal Stud. Inst., Baton Rouge, LA, USA; Shell Oil Co., USA; Fugro-McClelland, USA.
Science 243: 4890, 517-519, 1989.

Descriptors: *Gulf of Mexico/*Mississippi/geophysical surveys/oceanography/acoustical surveys/ocean floors/continental slope/North American Atlantic/North Atlantic/Atlantic Ocean/deep-sea sedimentation; craters/bottom features/geopressure/faults/diapirism/mud volcanoes/gas hydrates/concentric faults/genesis/Southern U.S.; United States/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

NOS EXCLUSIVE ECONOMIC ZONE BATHYMETRIC SURVEYS.
Pryor, D. E. NOAA, Natl Ocean Survey, Rockville, MD, USA
Technical Papers of the American Congress of Surveying and Mapping 45th Annual Meeting. Publ by American Congress on Surveying & Mapping, Falls Church, VA, USA p 133, Papers presented at the 1985 ASP-ACSM Convention (American Society of Photogrammetry), 1985.

Abstract: In response to a 1983 presidential proclamation declaring the oceanic areas surrounding the United States and its possessions as exclusive territory, the National Oceanic and Atmospheric Administration's (NOAA) National Ocean Survey (NOS) has begun a program of mapping the ocean floor. This territory, designated as the United States' Exclusive Economic Zone (EEZ), lies within 200 miles of the coastline and encompasses approximately 3. 4 million square miles. The essence of the NOS program is the collection, analysis, and distribution of bathymetric (water depth) and geophysical (gravity, magnetics, and seismic reflections) products within selected high priority areas of the EEZ. Present plans are to survey areas of the west coast of the United States with two NOAA ships. Survey techniques utilize state-of-the-art multi-beam swath mapping techniques.

Louisiana continental slope; geologic and seismic stratigraphic framework. AAPG annual convention with divisions SEPM/EMD/DPA.
Ray, P. K.; D. W. Cooke. U. S. Miner. Manage. Serv., New Orleans, LA, USA.
AAPG Bulletin 71: 5, 605, 1987.

Descriptors: *Louisiana/oceanography/continental slope/Southern U.S./United States/seismic surveys; geophysical surveys/Green Canyon/Mississippi Canyon/stratigraphy; changes of level/Sigsbee Scarp/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Acoustic evidence for gas-charged sediment in the abyssal Aleutian Basin, Bering Sea, Alaska.
Rearic, D. M.;S. R. Williams;P. R. Carlson, et al. U. S. Geol. Surv., USA
Open-File Report (United States Geological Survey. 1978) OF 88-0677, 40, 1988.

Descriptors: *Bering Sea/*Alaska/*sediments/*organic materials/geophysical surveys/economic geology/marine sediments/hydrocarbon/acoustical surveys/natural gas/methane/USGS/Western U.S./United States/offshore/West Pacific/Pacific Ocean/GLORIA/seismic profiles/United States Exclusive Economic Zone/deep-sea environment; environment/Aleutian Basin/marginal basins/alkanes/aliphatic hydrocarbons/29 (ECONOMIC GEOLOGY/ENERGY SOURCES)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Thirty-four-year shoreface evolution at a rapidly retreating Arctic coastal site Geologic studies in Alaska by the U.S. Geological Survey during 1986.
Reimnitz, E.; E. W. Kempema; T. D.(EDITOR) Hamilton, et. al. U. S. Geol. Surv., USAU. S. Geol. Surv., USA.
Geological Survey Circular 0998, 161-164, 1987.

Descriptors: *Alaska/*Arctic Ocean/*sedimentation/*geomorphology/oceanography/engineering geology/processes/shore features/continental shelf/shorelines/geologic hazards/nearshore sedimentation/landform evolution/USGS/Western U.S./United State; north-central Alaska/erosion/rates/energy/frost action/marine transport/ice gouging/bathymetry/North Slope/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/22 (ENGINEERING & ENVIRONMENTAL GEOLOGY)/23 (SURFICIAL GEOLOGY/GEOMORPHOLOGY)

Beaufort Sea coastal erosion, sediment flux, shoreline evolution, and the erosional shelf profile.
Reimnitz, E.; S. M. Graves; P. W. Barnes. U. S. Geol. Surv., USA.
Miscellaneous Investigations Series - U.S. Geological Survey I 1182-G, 22, 21 sheet, 1988.

Descriptors: *Arctic Ocean/*Alaska/*geomorphology/engineering geology/oceanography/processes/maps/continental shelf/erosion/shorelines/USGS/Beaufort Sea; engineering geology maps/marine geology maps/explanatory text; Western U.S./United States/northern Alaska/sedimentation; transport/marine transport/shore features/coastlines/landform evolution/geologic hazards/22 (ENGINEERING & ENVIRONMENTAL GEOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Workshop 5; Scientific mapping and research to characterize the EEZ; islands. Third Biennial Exclusive Economic Zone Symposium on Mapping and Research: Planning for the next 10 years. Reston, VA, Nov. 17-19, 1987.
Richmond, B. M.(chairperson);C. L.(chairperson) Morgan. U. S. Geol. Surv., Menlo Park, CA, USA; Univ. Hawaii, USA
Geological Survey Circular, C-1018, 89-100, 1988.

Descriptors: *Pacific Ocean/oceanography/economic geology/ocean floors/mineral resources/USGS/Central Pacific/United States Exclusive Economic Zone/cartography/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Detailed bathymetry and seismic stratigraphy of the Atlantic continental margin between Hudson and Baltimore canyons. Conference on Continental margin mass wasting and Pleistocene sea-level changes. Woods Hole, MA, United States, Aug. 13-15, 1980.
Robb, J. M.; D. W.(EDITOR) Folger; J. C.(EDITOR) Hathaway. U. S. Geol. Surv., Woods Hole, MA, USA; U. S. Geol. Surv., USA.
Geological Survey Circular, C-0961, 35-44, 1987.

Descriptors: *Atlantic Ocean/*New Jersey/*Delaware/geophysical surveys/oceanography/seismic surveys/continental margin/USGS/North American Atlantic; North Atlantic/Hudson Canyon/South Toms Canyon/Carteret Canyon; Lindenkohl Canyon/Wilmington Canyon/Baltimore

Canyon/Eastern U.S; United States/bathymetry/seismic stratigraphy/seismic profiles; submarine canyons/bottom features/slope stability/geologic hazard/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

GLORIA survey off the east coast of the United States. USGS research on energy resources, 1988; program and abstracts. Denver, CO, United States, Feb. 29-Mar. 2, 1988.
Robb, J. M.; D. W. O'Leary; W. P. Dillon, et. al. U. S. Geol. Surv., USA; Geological Survey Circular, C-1025, 52-53, 1988.

Descriptors: *Eastern U.S./*Atlantic Ocean/oceanography/geophysical surveys/continental margin/acoustical surveys/USGS/United States/North American Atlantic/North Atlantic/United States Exclusive Economic Zone/GLORIA/ocean floors/submarine canyons/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Long-range sidescan-sonar (GLORIA) images of the U.S. East Coast continental slope and rise, Florida Peninsula to Georges Bank. SEPM annual midyear meeting. Austin, TX, United States, Aug. 20-30, 1987.
Robb, J. M.; W. P. Dillon; D. W. O'Leary, et. al. U. S. Geol. Surv., Woods Hole, MA, USA.
Abstracts - Society of Economic Paleontologists and Mineralogists, Annual Midyear Meeting 4, 71, 1987.

Descriptors: *Eastern U.S./*Atlantic Ocean/oceanography/geophysical surveys/continental slope/acoustical surveys/geomorphology/continental ris; side-scanning methods/sonar methods/Florida/Southeastern U.S.; United States/Georges Bank/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Continental slope processes and morphology Scientific applications of current diving technology on the U.S. continental shelf; results of a symposium. Groton, CT, United States, May 22-24, 1984.
Robb, J. M.; J. C., Jr Hampson; R. A.(EDITOR) Cooper, et. al. U. S. Geol. Surv., Woods Hole, MA, USA; Univ. Conn., Natl. Undersea Res. Progr., Groton, CT, USA.
Symposia Series for Undersea Research 2: 2, 201-217, 1987.

Descriptors: *New Jersey/oceanography/geophysical surveys/continental slope/seismic surveys/Eastern U.S./United States; offshore/bathymetry/turbidity currents/landslides/debris flows; erosion/mass movements/geomorphology/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/20 (GEOPHYSICS/APPLIED)

Carbonates of the Louisiana continental slope Nineteenth annual offshore technology conference 1987, proceedings; Volume 2. Houston, TX, United States, April 27-30, 1987.
Roberts, H. H.; R. Sassen; P. Aharon. La. State Univ., Baton Rouge, LA, USA.
Proceedings - Offshore Technology Conference 19, 373-382, 1987.

Descriptors: *Louisiana/*sediments/oceanography/carbonate sediments/distribution/Southern U.S./United States/continental slope; topography/sedimentation/seismic surveys/geophysical surveys/oil seeps/precipitation/diagenesis/shells/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Distal shelf and upper slope sediments deposited during rising sea level, north-central Gulf of Mexico Gulf Coast Association of Geological Societies and Gulf Coast Section SEPM, 36th annual meeting; abstracts. Baton Rouge, LA, United States, Oct. 22-25, 1986.
Roberts, H. H.; I. B. Singh; J. M. Coleman, et. al. La. State Univ., Coastal Stud. Inst., Baton Rouge, LA, USA.
AAPG Bulletin 70: 9,1188, 1986.

Descriptors: *Louisiana/*sedimentation/*Gulf Coastal Plain/stratigraphy/cyclic processes/geophysical surveys/Holocene/marine sedimentation/changes of level/seismic surveys; Southern U.S./United States/Quaternary/North America/continental shelf/continental slope/mudflows/bioturbation/biogenic structure; sedimentary structures/deltaic environment/salt tectonics; diagenesis/marine sediments/Gulf of Mexico/North American Atlanti; North Atlantic/Atlantic Ocean/24 (SURFICIAL GEOLOGY,QUATERNARY GEOLOGY)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Hydrothermal activity on the Gorda Ridge.
Rona, P. A.; R. P. Denlinger; M. Fisk, et. al. NOAA, Miami, FL, USA; U. S. Geol. Surv., USA; Oreg. State Univ., USA; Univ. Calif. at Davis, USA; Oreg. Dep. Geol. and Miner. Ind., USA; Univ. Hawaii, USA.
Eos, Transactions, American Geophysical Union 69: 47,1588, 1988.

Descriptors: *Pacific Ocean/*Oregon/*sea water/tectonophysics/oceanography/geochemistry/sea-floor spreading/continental margin/hydrothermal conditions; North American Pacific/Gorda Rise/Pacific Coast/Western U.S.; United States/United States Exclusive Economic Zone/mid-ocean ridges/submarine springs/springs/vents/nomenclature/Sea Cliff hydrothermal field/hydrothermal fields/18 (GEOPHYSICS/SOLID EARTH)/07 (MARINE GEOLOGY AND OCEANOGRAPHY); 02 (GEOCHEMISTRY)

Late Quaternary sedimentology and evolution of the continental slope (long 94 degrees -95 degrees), Northwest Gulf of Mexico.
Satterfield, W. M. Univ. of Texas, Austin, TX, USA. Master's thesis, 121p., 1988.

Descriptors: *Gulf of Mexico/*sedimentation/*Texas/oceanography/controls/continental slope/tectonic controls/North American Atlantic/North Atlantic/Atlantic Ocean/Alaminos Canyon/Gulf Coastal Plain/North America/Southwestern U.S./United States/Quaternary/seismic survey; geophysical surveys/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Total tectonic subsidence: a parameter for distinguishing crust type at the US Atlantic continental margin.
Sawyer, D. S. Inst. for Geophys., Texas Univ., Austin, TX, USA
J. Geophys. Res. (USA) vol.90, no.B9 7751-69,, 10 Aug. 1985.

Abstract: Total tectonic subsidence (TTS) is the difference between the prerifting continental crust elevation and the present, sediment-unloaded, basement depth in a sedimentary basin. TTS is calculated using observations of bathymetry and basement depth and assumptions about sediment density and the loading response of the lithosphere. The author uses the extensional model for sedimentary basin formation to interpret the TTS of a passive continental margin. That model predicts that the TTS on an old margin should define the major crust-type boundaries and indicate the lateral distribution of extension within the extended

continental crust. TTS analysis of the US Atlantic continental margin indicates that the boundary between extended continental and oceanic crusts lies along the East Coast Magnetic Anomaly to the north of the Blake Spur Fracture Zone, and along the Blake Escarpment to the south.

Magnetic and bathymetric data from R/V Farnella cruise FRNL 85-4 in the Puerto Rico and U.S. Virgin Islands Exclusive Economic Zone.
Scanlon, K. M. U. S. Geol. Surv., USA
Open-File Report (United States Geological Survey. 1978) OF 86-0399, 3, 1986.

Descriptors: *Puerto Rico/*Lesser Antilles/*Atlantic Ocean/*Caribbean Sea/geophysical surveys/oceanography/surveys/ocean floors/USGS/United States Exclusive Economic Zone; Greater Antilles/West Indies/U. S. Virgin Islands/Virgin Islands; Leeward Islands/North American Atlantic/North Atlantic/magnetic surveys/bathymetry/echo sounding/acoustical surveys/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

GLORIA side-scan sonar surveys in Caribbean; Puerto Rico and U.S. Virgin Islands exclusive economic zone and Cayman Trough. AAPG annual convention with divisions; SEPM/EMD/DPA; technical program and abstracts.
Scanlon, K. M.;D. G. Masson;N. T. Edgar, et al. U. S. Geol. Surv., Woods Hole, MA, USA; Inst. Oceanogr. Sci., GBR
AAPG Bulletin 70: 5,644, 1986.

Descriptors: *Puerto Rico/*Lesser Antilles/*Caribbean Sea/oceanography/geophysical surveys/continental slope/marine geology/acoustical surveys/sonar methods; side-scanning methods/GLORIA/Puerto Rico Trench/Muerto Trough; Cayman Trough/volcanoes/thrust faults/United States Exclusive Economic Zone/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Workshop 3; Scientific mapping and research to characterize the EEZ; East Coast. Third Biennial Exclusive Economic Zone Symposium on Mapping and Research: Planning the next 10 years. Reston, VA, Nov. 17-19, 1987.
Schlee, J. S.(chairperson);D. B.(chairperson) Duane. U. S. Geol. Surv., Woods Hole, MA, USA; NOAA, USA.
Geological Survey Circular, C-1018, 65-74, 1988.

Descriptors: *Atlantic Ocean/*Eastern U.S/oceanography/economic geology/ocean floors/mineral resources/continental margin/USGS/North American Atlantic/North Atlantic/United States/cartography/United States Exclusive Economic Zone/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Descriptors: *Pacific Ocean/*Pacific Coast/economic geology/fuel resources/mineral resources/USGS/Western U.S./United State; continental margin/offshore/Alaska/United States Exclusive Economic Zone/publications/North American Pacific/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Unusual bed forms on the North Aleutian Shelf, Bristol Bay, Alaska.
Schwab, W. C.; B. F. Molnia. U. S. Geol. Surv., Woods Hole, MA, USA; Polar. Res. Board, USA.
Geo-Marine Letters 7: 4, 207-215, 1987.

Descriptors: *Alaska/*sedimentation/oceanography/transport/geophysical surveys/continental shelf/acoustical surveys/Aleutian Shelf/Bristol Bay; Western U.S./United States/sonar methods/side-scanning methods; erosion/ripple marks/bedding plane irregularities/sedimentary structures/sand/clastic sediments/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Scientists mapping Alaskan coastline.
EEZ-SCAN 86 Group (Bering Sea), Menlo Park, CA, USA
Geotimes 32: 8,15-16, 1987.

Descriptors: *Bering Sea/oceanography/marine geology/United States Exclusive Economic Zone/Alaska/Western U.S./United States/maps/sonar methods/geophysical surveys; Aleutian Islands/economic geology/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Geophysical data. The Atlantic continental margin; U.S. <Collective> The geology of North America.
Sheridan, R. E.; J. A. Grow; K. D. Klitgord, et. al. Rutgers Univ., Dep. Geol. Sci., New Brunswick, NJ, USA; U. S. Geol. Surv., USA; U. S. Geol. Surv., USA; Rutgers Univ., Dep. Geol. Sci., New Brunswick, NJ, USA.
Geol. Soc. Am. I-2, 177-196, 1988.

Descriptors: *Atlantic Coastal Plain/geophysical surveys/oceanography/surveys/continental margin/United States/North America/seismic surveys/refraction/velocity/reflection/magnetic surveys/gravity surveys/Atlantic Ocean/20 (GEOPHYSICS/APPLIED)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Workshop 9; Information needs for seafloor-seabed utilization. Third Biennial Exclusive Economic Zone Symposium on Mapping and Research: Planning the Next 10 Years. Reston, VA, Nov. 17-19, 1989.
Silva, A. J.(chairperson);C. N.(chairperson) Ehler;J. R.(chairperson) Vadus.Univ. R.I., Narragansett, RI, USA; NOAA, USA
Geological Survey Circular, C-1018, 133-147, 1988.

Descriptors: *ocean floors/mineral resources/mineral exploration/USGS/United States Exclusive Economic Zone; exploration/26 (ECONOMIC GEOLOGY/GENERAL & MINING)/07 (MARINE GEOLOGY AND OCEANOGRAPHY)

Late Quaternary geology of the Beaufort Sea inner shelf near Prudhoe Bay The United States Geological Survey in Alaska; accomplishments during 1983
Smith, P.; S. E. Bartsch-Winkler; K. M.(EDITOR) Reed. U. S. Geol. Surv., USA; U. S. Geol. Surv., USA.
Geological Survey Circular 0945, 100-103, 1985.

Descriptors: *Alaska/*Arctic Ocean/*sediments/*sedimentation/oceanography/geophysical surveys/stratigraphy/marine sediments; cyclic processes/continental shelf/seismic surveys/Quaternary/changes of level; environmental analysis/nearshore sedimentation/USGS/United State; offshore/Beaufort Sea/Prudhoe Bay/inner shelf/cores/geophysical profiles/reflection methods/seismic methods/marine sedimentation; Cenozoic/upper Quaternary/07 (MARINE GEOLOGY AND OCEANOGRAPHY)/24 (SURFICIAL

GEOLOGY,QUATERNARY GEOLOGY)

Preliminary geologic interpretation of USGS S.P. Lee seismic-reflection profile WO 76-7 on the continental shelf and upper slope, northwestern Oregon.
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Deep-sea drilling on the upper continental rise off New Jersey, DSDP sites 604 and 605.
van Hinte, J. E.;S. W.,Jr. Wise;B. N. M. Biart, et al. Vrije Univ., Amsterdam, Netherlands
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Abstract: Deep Sea Drilling Project Sites 604 and 605 on the upper continental rise are the first of a series of cored holes along the "New Jersey transect" which, when completed, will provide the first comprehensive dipwise suite of drill holes across a passive margin from the coastal plain to the abyssal plain. Drilling results document the age of important seismic sequence boundaries and allow their correlation with wells on the continental shelf and slope as well as with the regional oceanic seismic stratigraphy.

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van Hinte, J. E.;S. W.,Jr. Wise;B. N. M. Biart, et al. Vrije Univ., Amsterdam, Netherlands
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Preliminary geologic framework studies showing bathmetry, locations of geophysical tracklines and exploratory wells, sea floor geology and deeper geologic structures, magnetic contours, and inferred thickness of Tertiary rocks on the continental shelf and upper continental slope off southwestern Washington between latitudes 46 degrees N, and 47 degrees 30'N. and from the Washington coast to 125 degrees 20'W.
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Seismic stratigraphy, flexure and gravity anomalies in the Baltimore Canyon Trough, northeastern U. S. Atlantic margin.
Watts, A. B.; B. A. Swift Lamont-Doherty Geol. Obs., Palisades, NY, USA; U. S. Geol. Surv., USA.
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Map showing precision bathymetry of the south-central Louisiana nearshore, Isles Dernieres and Ship Shoal region
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Wise, R. A.; H. L. Oliver. U. S. Geol. Surv., Denver, CO, USA.
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Analysis of hummocky subbottom relief from observations north of Tigvariak Island, Beaufort Sea, Alaska.
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Shallow seismic stratigraphy between the Canning River and Demarcation Bay, Beaufort Sea, Alaska.
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Quaternary seismic stratigraphy of the inner continental shelf north of the Arctic National Wildlife Refuge Petroleum geology of the northern part of the Arctic National Wildlife Refuge, northeastern Alaska
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Spatial variability of bottom types in the lower Chesapeake Bay and adjoining estuaries and inner shelf.
Wright, L. D.; D. B. Prior; C. H. Hobbs, et. al. Coll. Wm. and Mary, Va. Inst. Mar. Sci., Gloucester Point, VA, USA; La. State Univ., USA.
Estuarine, Coastal and Shelf Science 24: 6, 765-784, 1987.

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Heat flow and thermal structure of the Washington-Oregon accretionary prism-a study of the lower slope.
Yaolin Shi;Chi-yuen Wang;M. G. Langseth, et al. Dept. of Geol. & Geophys., California Univ., Berkeley, CA, USA
Geophys. Res. Lett. (USA) vol.15, no.10, 1113-16, Sept. 1988.

Abstract: Heat flow measurements across the Washington-Oregon convergent margin show several characteristic features: a well defined peak at the foot of the overthrust, a gradual decrease landward across the lower slope reaching a minimum at the ridge, and a gradual rise further landward. Constrained by geological and seismic evidence on the rate of stacking and the dimension of stacked thrust sheets and by drilling results on sediment properties, the authors use a two-dimensional time-dependent finite element procedure to model the stacking of overthrust slices of sediments and to calculate the thermal structure beneath the lower slop of the accretionary prism; the calculated heat flow profile is in good agreement with the measurements. Advective heat transfer due to stacking of overthrust sheets and topographic changes are shown to play a dominant role in controlling the surface heat flow and the thermal state of the accretionary prism.

High-resolution multichannel seismic-reflection profiles across the Helena Banks strike-slip fault zone offshore of the Charleston, South Carolina, earthquake area.
Yuan, A.; J. C. Behrendt. U. S. Geol. Surv., USA.
Miscellaneous Field Studies Map (United States Geological Survey) MF-2056, 1 sheet, 1988.

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